BOSTON PUBLIC LIBRARY
3 9999 07937 109 0

The Wisdom of Our Choices:

GOVDOC
X1
BOF
00/1

Boston's Indicators of Progress, Change and Sustainability 2000

BRA Planning Districts

gov 00-2771

The Wisdom of Our Choices:

Boston's Indicators of Progress, Change and Sustainability 2000

A PROJECT OF THE CIVIC COMMUNITY OF BOSTON

This project is made possible through support and funding from

The Boston Foundation

The City of Boston

with

Fleet Charitable Trusts

The Stone Family Foundation

Boston College

Northeastern University

The Boston Redevelopment Authority

The Metropolitan Area Planning Council

in collaboration with Boston's community-based organizations, public agencies, civic and academic institutions and the National Neighborhood Indicators Partnership of the Urban Institute.

Copyright © 2000 by The Boston Foundation. All rights reserved.
The Boston Foundation encourages individuals, public agencies, community groups, and non-profit organizations to use, copy, and distribute this work for non-commercial purposes. (Please copy and return the last page of the report to help us document its use.)
Distribution or copying of this work by for-profit entities or for commercial purposes is prohibited without permission.

October 2000

CITY OF BOSTON • MASSACHUSETTS

OFFICE OF THE MAYOR

October 2000

Dear Friends:

I am pleased to help introduce *Boston Indicators of Progress, Change and Sustainability*, a cooperative effort of The Boston Foundation, the City of Boston, and the Metropolitan Area Planning Council with the assistance of local businesses, educational institutions, and community-based organizations.

Boston Indicators is a major accomplishment that is the envy of other cities. It provides us an opportunity to examine our current situation from a historical perspective. Indicators of civic involvement, culture, the economy, education, public health, environment, housing, safety, technology, and transportation highlight our many successes and identify areas for increased effort. The report provides a road map to the possibilities of the future.

The ultimate achievement of the *Boston Indicators* project lies in our response. This report is the basis for ongoing public and private cooperation to promote the healthy growth and development of Boston. It informs our discussions and focuses our efforts. Boston is a world class city with world class residents. I am committed that no one is left behind as we enter the new millennium.

I look forward to working with you to ensure that *Boston Indicators* is a strong foundation for future success.

Sincerely,

Thomas M. Menino

Thomas M. Menino
Mayor of Boston

BOSTON CITY HALL • ONE CITY HALL PLAZA • BOSTON • MASSACHUSETTS 02201 • 617/635-4000

tBf

The Boston Foundation

Dear Members of the Greater Boston Community,

The Boston Foundation is pleased to present to you a report that represents a deeply collaborative effort, *The Wisdom of Our Choices: Boston's Indicators of Progress, Change, and Sustainability*. Over the course of the past three years, the City of Boston's Sustainable Boston Initiative and the Boston Foundation's Community Building Network, have produced a remarkable new tool in partnership with residents, community-based organizations, public agencies, civic institutions and local universities. In many sessions hosted at the Boston Foundation, hundreds of people and scores of organizations met to reach agreement on a way to measure and guide change in our communities and the region.

A draft report was released last June at a Boston Citizen Seminar. That event, attended by 250 Bostonians, was hosted by Boston College and co-sponsored by the Boston Foundation, the City of Boston, the Metropolitan Area Planning Council and Boston 2000. The draft report was distributed for review to almost 1000 people and met with acclaim both locally and nationally. It was covered by the *Boston Sunday Globe* and presented to the National Neighborhood Indicators Partnership in Washington, D.C. as well as at conferences in Korea, Austria, and Portugal. The Boston Foundation has received requests from community foundations around the country about how to initiate a project of this kind, and our Board of Directors intends to make the *Indicators Project* a centerpiece of our own assessment process.

The *Indicators Project* is moving to the next phase. With the release of this report, we will work with our partners to coordinate sessions among a cross-section of Bostonians to further an informed, collaborative civic agenda. We also intend, over the next year, to make much of this information available on line so that community-based groups as well as policy makers and donors can get the information they need to make informed decisions.

Boston contains extraordinary intellectual and social capital. When we in Boston put our minds together and draw on Boston's wealth of expertise and experience to address a challenge, we more often than not create a breakthrough — whether in business, government, philanthropy or community-based work. This project represents one more example of Boston's capacity for breakthrough thinking and action.

This is truly a project driven by a strong and growing partnership among civic institutions, public agencies and community groups. I would like to thank all those who contributed to this project. We offer *Boston's Indicators of Progress, Change, and Sustainability* as one form of common ground on which we can come together to realize our greatest hopes for Greater Boston in this new millennium.

Sincerely,

Anna Faith Jones, President
The Boston Foundation

Contents

Preface 9

Why New Measures? 13

Definitions and Data Sources 17

The Boston Story 19
A Vision for the Future: Boston 400 22
Key Facts about Boston's Children and Youth 24

The Regional Context 27
Metro-Boston Indicators 32

At A Glance
Boston 34
Boston Neighborhoods 35
Metro-Boston 36
Metro-Boston Inner Core 37

SECTION ONE **Civic Health** 39

Boston's capacity for inclusive civic dialogue is improving and the city retains a high level of neighborhood activism; however, participation by eligible voters, particularly young people, is low in many neighborhoods.

INDICATORS
1.1 Civic Involvement 47
1.2 High Voter Participation 51
1.3 Stability and Investment within Neighborhoods 55
1.4 Local Ownership 58
1.5 Civic Confidence 61
1.6 Healthy Race Relations 62
1.7 Welcoming, Inclusive Environment 64

SECTION TWO **Cultural Life and the Arts** 67

Boston offers many opportunities for creativity, self-expression, and art appreciation, and the city's increasing diversity has reshaped and enriched its cultural landscape; cultural and arts programs require greater support to realize their potential.

INDICATORS:

2.1 Vibrant Expressions of Cultural Diversity 76
2.2 Active Participation in Art Making 79
2.3 Opportunities for Arts Appreciation 82
2.4 Expressions of Spirituality 84
2.5 Protected Historic Sites and Architectural Heritage 85
2.6 Access to a Broad Range of Leisure Activities 87
2.7 Opportunities for Athletic Expression 90
2.8 High Economic Impact of Arts and Cultural Sectors 91
2.9 Strong Financial Support and Participation 92

SECTION THREE **Economy** 95

Boston's booming economy offers an historic opportunity to spread the benefits of growth equitably; the high cost of living, as well as educational achievement disparities across race, present challenges.

INDICATORS:

3.1 Strong, Diverse Economy 103
3.2 Low Unemployment 104
3.3 Opportunity for All Residents 105
3.4 Adequately Prepared Workforce 106
3.5 Affordable Cost of Living 108
3.6 Family Self-Sufficiency 109
3.7 Low Poverty Rates 110
3.8 Successful Neighborhood Economies 112
3.9 Economic Equity for All Bostonians 114
3.10 Economic Equity in Boston's Neighborhoods 116

SECTION FOUR **Education** 119

Comprehensive school reform is beginning to show results but racial/ethnic disparities in performance persist; an emphasis on higher education is also needed to prepare young people for success in the new economy.

INDICATORS:

4.1 School Readiness 129
4.2 Confidence in the Public Education System 130
4.3 High Academic Achievement 132
4.4 Parental and Community Involvement 137
4.5 Quality Teaching 137
4.6 Quality School Culture and Environment 139

4.7 Out-of-School and Lifelong Learning Opportunities 141
4.8 Higher Education Opportunities 144

SECTION FIVE **Environment** 147

Boston's environment continues to improve and opportunities abound for future improvements; the achievement of goals will require greater citizen participation, advocacy, and stewardship.

INDICATORS:

5.1 Smart Growth 155
5.2 Clean Air 156
5.3 Clean Water 159
5.4 Clean, Useable Land 163
5.5 Healthy Ecosystems 164
5.6 Attractive Green and Recreational Spaces 167
5.7 Beautiful Communities 170
5.8 Environmental Responsibility and Stewardship 172

SECTION SIX **Housing** 175

Boston leads the region's municipalities in the percentage of subsidized housing units, but rising housing costs are displacing many long-time renters and discouraging needed young workers; a significant increase in the supply of housing will require regional collaboration and policies.

INDICATORS:

6.1 Adequate Supply 182
6.2 Equitable Distribution of Affordable Housing 186
6.3 Housing Affordable to All Residents 188
6.4 Safe and High Quality Homes 193
6.5 Fair Housing 197
6.6 Neighborhood Stability 198

SECTION SEVEN **Public Health** 201

Boston's comprehensive health care network, reaching out to all neighborhoods, ages, and racial/ethnic groups, is one of the best in the nation; racial/ethnic disparities in access to insurance and in health outcomes remain a challenge.

INDICATORS:

7.1 Universal Access to Health Care 209
7.2 Investment in Healthy Children 210
7.3 Commitment to Preventive Health Strategies 213
7.4 Healthy Behaviors 216
7.5 Low Death Rates 220
7.6 Low Rates of Disease 223
7.7 Low Rates of Environmental Hazards 224

SECTION EIGHT **Public Safety** 229

Boston's acclaimed public safety success can be secured by investment in the city's children and youth.

INDICATORS:

8.1 Low Crime Rates 236
8.2 Perception of Public Safety 242
8.3 Strong Civic and Social Networks 243
8.4 Private-Sector Investment in Neighborhoods 246
8.5 Resident Satisfaction with Neighborhood Quality of Life 246

SECTION NINE **Technology** 249

Boston has received national recognition for the level of technology in schools and the number of community computing centers available to residents; technology access in homes continues to reflect a digital divide.

INDICATORS:

9.1 Access to Technology 257
9.2 Use of Technology for Economic Development and Commerce 262
9.3 Use of Technology for Community Building 264
9.4 Use of Technology for Teaching and Learning 265
9.5 Access to Local Media 266

SECTION TEN **Transportation** 269

Most Bostonians are within walking distance of public transportation and depend on public transit more than residents of other municipalities; the rate of increase in vehicle miles traveled is far outstripping population growth, reflecting sprawl and the need for better regional planning and transit connections.

INDICATORS:

10.1 Planning that Reduces Sprawl 276
10.2 Affordable and Convenient Access for All Residents 278
10.3 Environmentally Sound Regional and Local Transportation System 281
10.4 Transportation Options that Enhance Health and Community Life 285
10.5 Safe, Reliable, and Comfortable System 288

Appendix

The Process of Indicators Development 293
List of Participants 297
Boston's Cultural Diversity — Population Counts 301
Data Resources 304
List of Acronyms 308
Acknowledgments and Credits 310
Authors' Note 311

"This is one of those rare moments in our city's life, a time when we have a chance to reinvent Boston and preserve the best of it for many years to come. And if we work together, there is nothing we can't do!"

Mayor Thomas M. Menino, State of the City Address
January 11, 2000

Preface

Planning for the future has never been a strong point for Americans. Perhaps it is time for a change. The United Nations estimates that by 2025, nearly two-thirds of the Earth's population, or five billion people, will live in cities. Sustainable, equitable solutions to the challenges of urban life will take center stage in the 21st century. Boston, although a small city, can lead the way.

Boston is America's urban success story. It is also a city at a crossroads, never stronger economically but facing new challenges bred from that success. This report, *Boston's Indicators of Progress, Change, and Sustainability*, is designed to guide change and to measure progress along the way. Boston College is committed to hosting a Boston Citizen Seminar every two years from the year 2000 through 2030, Boston's 400th anniversary, to review progress and to set new civic goals.

In 2030, a young Bostonian who is fifteen years old in 2000 will be turning 45, the age at which he or she may move to the highest levels of civic leadership. A child born in 2000 may be raising a family of his or her own, and thinking about how to get involved in community life. By 2030, leaders in the year 2000 will have passed on their wisdom to younger men and women. The residents of Boston in 2030 will inherit the fruit of the choices we make today.

The year 2000 in Boston represents an unprecedented opportunity.

Boston's unemployment, crime and vacancy rates are all at record lows. Public confidence is

high, and future projections are generally positive. In many ways, Boston is already close to becoming that elusive "city on a hill" — an urban center that offers the best of America's promise to its residents, workers, and visitors. This is the result of decades of hard work in every sector and neighborhood, as well as a period of sustained economic expansion.

But Boston is also facing a number of challenges. As detailed in this report, Boston's positive statistics on average mask a deeper reality. In the midst of generally rising prosperity, the cost of living has outpaced wages for many Bostonians and has created a negative economic undertow. Racial and class disparities in access to quality health care, schools, housing, technology, and transportation continue to reflect historic patterns of disadvantage which have not changed in proportion to Boston's economic success. These realities, in an era of almost unparalleled growth, call for civic imagination and action.

In areas such as public safety, the environment, jobs, public health, cultural life, technology, and civic health, Boston has made great progress through innovative programs and the engagement of residents, with a deepening spirit of collaboration across sectors.

But questions remain for Boston in the year 2000:

- Can a city extend the benefits of economic success to all of its residents and neighborhoods?

- Can it retain a vibrant mix of income, ethnic and age diversity even as it attracts higher income residents?

- Can it create pathways to educational and economic success for all its young people?

The challenges outlined in this report are shared by many municipalities throughout the region: a shortage of affordable housing and rising cost of living; under-performing schools; insufficient training opportunities for jobs in the new economy; a shortage of skilled workers. Progress on these challenges will require statewide policies and regional collaboration. Many of these challenges are also shared by cities around the country and around the world.

Boston, with its wealth of social and intellectual capital, its cultural diversity, its environmental and other resources, may have what it takes to succeed. Some would go so far as to argue that if it can't be done in Boston, it can't be done.

This report is designed to help the people of Boston chart a wise course of action for the future. It allows us to "measure what we value and value what we measure" in ways that traditional reports do not. It brings together data from many sources and promotes a collaborative approach to analysis and action.

It also clarifies the interaction among the social, economic and environmental factors that influence outcomes in any one area. This allows for a comprehensive look at community life and for a more holistic approach to individual decision-making and public policy.

The Wisdom of Our Choices is designed:

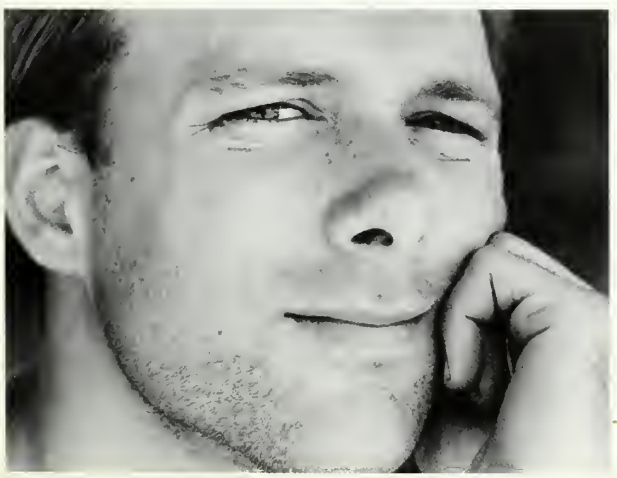
- **to provide information** to assist with community planning and problem-solving;

- **to help business, government, community, and civic leader**s find effective points of intervention and collaboration;

- **to build relationships across traditional boundaries:** sectors, races, neighborhoods, generations, levels of government, and between Boston and its metropolitan neighbors;

- **to tell the story of Boston's successes and challenges in ways obscured by conventional measures,** so that problems can be assessed within the context of our social, economic and environmental assets; and,

- **to market Boston not only to newcomers but to Bostonians,** who, with the help of the media, tend to see our glass as only half full when we compare ourselves with other cities and regions.



A Collaborative Civic Project

The *Indicators Project* was initiated early in 1997 by the City of Boston's Sustainable Boston Initiative and the Boston Foundation's Community Building Network. It was also supported in part by the National Neighborhood Indicators Partnership at the Urban Institute in Washington, D.C.

More than 300 Bostonians from diverse sectors, neighborhoods, levels of government and racial/ethnic groups have participated in working sessions to conceptualize this report and to develop and then narrow lists of proposed indicators and measures. Many others have helped to find and format relevant data.

A draft of the report was released at a 1999 Boston Citizen Seminar, hosted by Boston College and co-sponsored by the Boston Foundation, the City of Boston, Boston 2000 and the Metropolitan Area Planning Council. Mayor Thomas M. Menino gave the keynote address, highlighting the usefulness of the indicators as a way to measure progress. The Mayor's address was followed by a panel of civic leaders who discussed major issues facing the city. Then, with 25 facilitators drawn from the United Way of Massachusetts Bay, Action for Boston Community Development, and many other organizations and institutions, 250 participants engaged in deliberation at their tables about the future of the city and the region.

The draft report was subsequently distributed to an additional 700 residents, public agency staff, academics, and civic and community leaders for review and comment. In this final edition, these comments and suggestions have been incorporated, the charts and maps reworked, and data updated where possible.

The goal of the *Indicators Project* is to create a shared tool for data collection, analysis and reporting that can be used by stakeholders in Boston to "tell the story" of how Boston, its neighborhoods and region are doing, and to guide and measure change.

A Continuing Opportunity to Monitor Progress

As soon as is feasible, the report will be made available on line to increase access by the public and other civic users. Through their engagement with the indicators and measures presented here, and with continuing dialogue about how best to achieve the future we want, *Boston's Indicators of Progress, Change, and Sustainability* will be refined and adjusted over time.

A second *Indicators Report* will be released at a Boston Citizen Seminar in 2002.

The Boston Foundation, the Metropolitan Area Planning Council, the Codman Square Health Center, and a number of other organizations are already exploring ways to integrate the indicators into their own planning and assessment processes.

Some groups and institutions are also collaboratively funding an Annual Boston Survey by the Center for Survey Research at the University of Massachusetts, Boston. The survey will gather qualitative data to inform and update the indicators in areas such as technology and cultural life that currently have few sources of consistent, accurate information.

The indicators as they stand are designed to monitor change — not drive it. In the coming months, the Boston Foundation and other civic institutions will coordinate a number of committees to review the indicators in order to create a shared *Civic Agenda*. Using the Indicators as a way to inform opportunities, promote collaboration and evaluate impact, Bostonians will be better equipped to build on our strengths in times of both challenge and opportunity.

Why New Measures?

This report presents a new set of measures that reflect our values as a community and the strengths and assets on which we can build toward shared goals for the future. They help us to understand that each of us, as a Boston resident, is part of a neighborhood, a city, and a region, as well as global economic and natural systems. Each of these systems profoundly affects our lives; in turn, each system is affected by every one of us.

Indicators are presented here as positive goals for the future in ten categories, with measures for each indicator that provide an objective way to assess current conditions and trends over time. With these indicators, we have a new opportunity to look at the patterns of relationship between the individual and the community, the neighborhoods and the city, the city and the region — in essence, Greater Boston as a complex organism. Understanding Greater Boston's "ecology" means understanding our relationship with our environment, our economy and with one another at many levels. Boston is the nucleus of this organism, itself defined by many different kinds of people and neighborhoods.

A Changing World

The global economy has made us more aware than ever of our connections to people across the world as well as across the street. Local companies that once served the city and region are quickly being replaced by national and multinational corporations. While some of these corporations remain headquartered in Boston, most now serve a global clientele. At the same time, new technologies are changing the way we live, work, communicate, and make decisions.

These changes call into question the adequacy of traditional forms of civic leadership, which depended in large part on a few knowledgeable and powerful people in business or government to represent local interests. With the increasing pace of mergers, the sale of local companies to

non-local owners and the promise of new telecommunications technology, responsibility for being knowledgeable and exercising power on behalf of our local interests is being transferred to every one of us.

For Boston to succeed in meeting the challenge of being a shining example of what is possible for cities of the future, we need new ways of measuring current conditions, tracking change and identifying our best opportunities. We cannot conceive of Boston's future as independent of regional and global economics, nor can we imagine that one family or one neighborhood can prosper forever while others fall behind.

To progress, we must — as individuals, families, neighborhoods and municipalities — learn to work together across traditional boundaries as members of one region. Boston's indicators give us new tools with which to "think regionally and act locally."

Asset-Based Measures to Identify Strengths

For too long we have measured the quality of our lives and painted the face of our communities with deficit measures — crime, infant mortality, teen pregnancy and school dropouts — obscuring the many strengths and rewards of neighborhood life. Moreover, we have measured these conditions —whether in health, housing, public safety, employment or education — as if they were unrelated to each other. Finally, we have measured these negative conditions as if they were occurring in a vacuum, isolated from citywide and regional trends or macro-economic forces.

Today, in addition to trying to achieve a decrease in negative measures such as high school dropouts or infant mortality, we focus even more strategically on increasing outcomes we want: the number of third graders who can read at the third grade level; the number of Boston jobs held by Boston residents; the number of "swimmable" days in Boston Harbor. After decades of community revitalization, we now understand that by identifying our strengths, we have a much better chance of overcoming challenges.

Shared Access to Objective Data

The *Indicators Project* does not engage in original research. It does attempt to gather in one place much of the excellent research done by local institutes and think tanks, public agencies and universities. While much of this work is publicly available, it is sometimes difficult to locate and then difficult to evaluate in terms of its relevance to a particular trend, place, group or issue. By capturing objective data at the neighborhood, citywide and metropolitan levels, *Boston's Indicators of Progress, Change, and Sustainability* provide the foundation for meaningful dialogue about our values, options and choices.

Having access to shared, objective data allows us to enter the public debate about issues or engage in a dialogue about future goals with a shared point of departure. This report looks at what the measures tell us about how Boston is doing in meeting our shared goals today. Future reports will tell us how much progress we are making.

Understanding the Pattern of Relationships

Recent progress in efforts such as community policing and family support, which combine a variety of government and community resources in a coordinated strategy, are beginning to open our eyes to the need for greater collaboration across traditional disciplines and departments. We are only now beginning to measure community conditions in relationship to one another, such as the impact of high quality after-school programs on youth violence or on school performance.

Boston's Indicators of Progress, Change, and Sustainability can help to educate us about what we can do to create a better future by helping us to see interrelationships: how public safety affects neighborhood economic investment; how access to health care affects a child's ability to learn; how access to English as a Second Language (ESL) classes, computer skills or public transportation can help a neighbor find and keep a job; how air and water quality affect our basic health. These interrelationships will

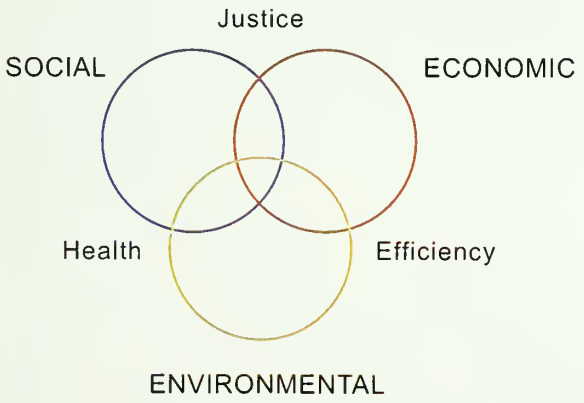
emerge even more clearly when the report is made available on line.

Achieving Sustainability

In 1996, the President's Council on Sustainable Development (PCSD) set forth a new vision for the nation: "…. A sustainable United States will have a growing economy that provides equitable opportunities for satisfying livelihoods and a safe, healthy, high quality of life for current and future generations. Our nation will protect its environment, its natural resource base and the functions and viability of natural systems on which all life depends."

This vision of "sustainable development" lays out the components of a whole system: a vibrant and prosperous economy; a just and equitable society; a healthy environment. To achieve that vision of sustainability will require progress on all parts of the "whole system." Real sustainability occurs when a community sees and addresses its challenges as related to one another, and begins to address them systematically — as a whole system.

Sustainability results from whole systems change:



For example, when social and environmental goals are met in tandem, people become healthier. When social and economic indicator goals are met in tandem, justice results. When economic and environmental quality goals are sought together, resource-preservation practices begin to emerge, resulting in efficiencies that, in turn, foster greater levels of sustainable economic growth.

Boston's Indicators of Progress, Change, and Sustainability provide a valuable tool for understanding the social, environmental, and economic determinants of our quality of life.

- *Economic sustainability* indicators include such things as capital assets, labor productivity, overall productive capacity, innovation, the skills of the labor force, and economic distribution or equity issues such as income trends.

- *Social sustainability* indicators reflect factors that affect the well-being of individuals, families and communities such as the quality of educational opportunities, public safety considerations and health care access, as well as opportunities for personal and cultural expression, or opportunities to feel and express a sense of community.

- *Environmental sustainability* indicators speak to the physical context of our lives — to whether the air in our homes and on our streets is clean, whether we have pure water to drink and good land to develop, and whether we have convenient access to public transportation and recreational open spaces.

One result of a whole systems approach is that outcomes are seen in context. Examining relationships across categories and among geographic levels broadens our vision and increases our ability to look holistically at problems and opportunities. Evaluating the short and long-term impact of decisions ensures a high quality of life today and secures endowments for the future. The process of achieving sustainability will evolve over time. What we do know is that a sustainable community is one that is socially just, environmentally sound, and economically vital.

Seeing Things in Context

The ability to examine relationships and trends across sectors and within the neighborhood, city, and metropolitan contexts lends a great deal of insight to the challenges we face.

We have tried to express the indicators and measures in "nesting" units of geographic measurement. Where possible, for example, an indicator on housing affordability or access to health care is provided at the neighborhood, citywide and regional levels, allowing for comparisons and juxtapositions.

This reflects an effort to provide indicators that make it possible to understand conditions in their geographic context: how one neighborhood is doing compared with another; how Boston is doing compared to other cities in the region or compared to the region as a whole; how broad economic or environmental conditions affect outcomes in smaller areas. Because most data are not yet available at all geographic levels, this effort will have to stand for now as a work in progress.

The methodology will be refined as more data become available and as data are geo-coded to allow for nesting geographic aggregations — from the sub-neighborhood out straight up through to the metropolitan region.

Academically, multi-level methodology is the subject of much debate. Realistically, its use is crucial to our ability to have an informed dialogue. The local dialogue begins with this report.

Expressing Our Values and Goals

Finally, *Boston's Indicators of Progress, Change, and Sustainability* expresses our values as a community and our goals for the coming years, and provides a means to measure progress and the wisdom of our choices along the way. We invite you to participate in shaping and using these indicators of Boston's health and well-being and hope that together, like generations before us, we will leave the legacy of a city that is better for our having been here.

Definitions and Data Sources

What is an Indicator?

An indicator is a measure or a set of measures that describes a complex social, economic, or physical reality. In this report, indicators offer knowledge and insights about the health and well-being of Boston, its neighborhoods and the region as a whole. They measure current quality of life issues such as the cleanliness of parks and streets, as well as long term endowments such as the cleanliness of the harbor and rivers. As used in this report, indicators also reflect civic values and goals identified by hundreds of participants. Taken together, the indicators contained in this report are organized into ten major categories and provide a tool for analysis, mediation and decision making among residents, civic institutions and policy makers alike.

What is a Measure?

A measure is one data point that acts as a gauge or barometer to tell us how well or poorly we are doing with respect to an indicator. Measures use quantifiable data, preferably collected over time, to identify trends and assess whether conditions are improving, staying steady or deteriorating. Because of the complexity of most issues facing Boston and the region, one indicator may have two or more measures. Most of the indicators are expressed as fairly "timeless" values and goals (e.g., low unemployment, clean air, low rates of disease, etc.) The measures used, however, may change over time, depending on their relevance, the needs of the community, new data availability and new developments in society.

Criteria Used for Selection:

- **Relevance and impact**

Is the indicator associated with one or more issues which people in Boston care about and which have meaningful policy impacts?

- **Validity and availability**

Are the measures objective, statistically defensible and credible? Are the data verifiable and easily and affordably reproducible for future reports?

- **Simplicity**

Are the measures appealing and understandable to the general public and to policy makers?

- **Ability to aggregate information**

Does the measure contribute to the understanding of the important or broader issue expressed by the indicator? For practical reasons, indicators that aggregate information on broader issues are preferred.

- **Ability to reflect trends**

In order to understand and determine long-term impacts, can the data reflect trends over time? Are time-series data available?

Data Sources

We are indebted to scores of public agencies, research institutes and organizations for the provision of data used in this report. Data sources are listed at the bottom of charts and graphs associated with each measure. The report relies on several major categories of data.

1. U.S. Census data from 1990 and earlier. This represents the most extensive, reliable and consistent source of data, but it is unfortunately available only at ten-year intervals. Consequently, while Census data provide an excellent basis for comparison, they do not reflect recent demographic and economic trends. Where possible, we have supplemented Census data with administrative data, studies and projections that provide a better reflection of current conditions and trends. (The 2002 Indicators Report will include 2000 Census data, allowing for trend analysis in many areas.)

2. Administrative data from public agencies and institutions generally used for the purpose of administrative record keeping and reporting. These types of data reflect the most up-to-date quantitative information.

3. Qualitative data from behavior and attitude surveys. These data, though understood to be less objective than the quantitative data sources listed above, are seen by many as critical to assessing current conditions, perceptions and the effectiveness of public policies. Qualitative data tell us about people's actual experiences, and provide us with insights on issues such as hope, trust and empowerment that quantitative data cannot capture. Surveys can also provide information about areas such as technology access, spiritual life, parental involvement or participation in cultural activities for which administrative data is not generally available. In order to create a consistent source for such data, several organizations in Boston are collaborating to develop an Annual Boston Survey to be conducted by the Center for Survey Research at the University of Massachusetts/Boston.

4. Special reports, comparative indices and studies by universities, public agencies, community-based organizations and research institutes that examine specific issues and sometimes present a point of view or set of recommendations. These studies are invaluable sources of information about specific issues for which data have been collected, analyzed and interpreted. They offer excellent data that can be used for a number of purposes in addition to the original purpose of the research.

Disclaimer

All data used in this report have been analyzed, summarized, and provided as shown by the source identified. No original data were gathered or analyzed by the report's authors. For that reason, there may be errors or omissions in the report even though its many authors, editors and reviewers have tried to verify and ensure the validity of all information included. For details on data provided, please contact the listed source that appears at the bottom of the data chart, graph or map.

Please Note:

i) The terms "Hispanic" and "Latino" are used interchangeably throughout this report to refer to persons of Spanish-language heritage living in the United States. Most public data sources use the term "Hispanic," but many Bostonians of Spanish-language heritage prefer "Latino," which references Latin American roots. Hispanics/Latinos can be of any race.

ii) Throughout this report, recent data has been used where possible. The U.S. Census Bureau will make most 2000 Census results available only in 2001. Neighborhood-scale data will not become available until 2002. The 2002 Indicators Report will include new Census data.

Boston is the economic engine of New England and the governmental, financial, cultural, educational and health care capital of Massachusetts. With almost 600,000 residents within 47 square miles, it is also a small, neighborly city.

The Boston Story

Boston enters the 21st century having overcome its major 20th century challenges. It also retains its reputation as one of the world's most interesting and livable cities.

Over the course of the 20th century, Boston underwent a deep metamorphosis, successfully shifting its economic base from manufacturing to business, professional, financial and other services. In the process, Boston emerged as a center of technological innovation and, with increasing diversity within all major racial groups, became one of the most ethnically diverse cities in the nation.

In the middle of the 20th century, however, Boston was thought to be a dying city on the verge of bankruptcy. Distrust between leaders and factions seemed insurmountable; residents were leaving, and economic prospects seemed dim due to the continuing loss of the city's traditional manufacturing base. In the mid-1950s, civic leaders came together in Boston Citizens Seminars to envision a new path of growth for the city, one that eventually led to plans for both urban renewal and Boston's shift to a service-based economy.

The tight-knit fabric of Boston's neighborhoods and ethnic enclaves frayed during this transition. In the 1960s, Boston was weakened by severe institutional disinvestment and then by racial tensions surrounding the desegregation of Boston's public schools in the 1970s.

In response, refusing to let the city come apart completely, another generation of Boston residents, community-based organizations, business and civic leaders mobilized to secure a better

future for the city. Over the next 25 years, they worked in the city's neighborhoods, in government and in citywide partnerships and coalitions. They established health care centers, community development corporations and youth programs. They upgraded the city's parks and playgrounds and reclaimed abandoned land. They planned new transportation systems, reinvented historic settlement houses and reinvigorated religious institutions. And, they produced new forms of theater, poetry, and art.

In that quarter century — a time of great demographic change in Boston — old and new Bostonians revitalized the city's housing stock and commercial districts, built new institutions and created a new sense of community.

Boston's many successes

Compared to most cities in the nation and the world, Boston is doing extremely well:

- **Boston's unemployment rate, at 3.1%, hovers at a near historic low;**
- **Boston's office vacancy rate is virtually zero.**
- **Crime is at an historic low, falling for the ninth straight year.** Thanks to the success of Boston's community policing procedures and increased community involvement, more than 78% of the city's residents feel safe out alone in their neighborhoods at night.
- **Nearly 690,000 jobs are located within the Boston city limits, about 275,000 of which are held by residents — making Boston one of the most job-rich cities in the nation.** Boston is home to growth-industry clusters such as financial services, education, medical research and health care, which bodes well for the future of our economy.
- **Boston remains a world-class center of medical care and higher education, and is a center of the visual and performing arts,**

historic architecture and tourism. Boston is also the headquarters of a number of major international nonprofit organizations.

- **Boston today is one of the most ethnically diverse cities in the world.** This is due to the great diversity within Boston's racial groups and to an increase in immigration from all parts of the globe. Almost 50% of Bostonians are people of color. Most importantly, race relations in the city have generally improved since their nadir in the 1970's. Church-based and civic dialogues continue to build needed bridges of mutual understanding and respect.

- **Bostonians enjoy high quality parks and open spaces, including waterfront access.** Improvements to the city's historic park system, the almost-completed Boston Harbor cleanup, additions to Harbor Walk, the new Boston Harbor Islands National Park, and redevelopment of neighborhood "brownfields" have all resulted from decades of activism on the part of Boston's residents and environmentalists.

- **Almost 98% of Bostonians live within a quarter-mile of public transportation,** and residents, visitors, and tourists alike can take advantage of Boston as a walking city. City and state transportation plans will further enhance connections among the city's neighborhoods and between residents and jobs.

- **Boston's childhood immunization rate, at 88%, is the highest in the nation**, and infant mortality rates plummeted for most of the 1990s, through state legislation, all of Boston's children are now guaranteed access to primary health care.

- **Through Mayor Menino's "Kids Compute 2001 Initiative," all of Boston's public schools are now connected to the Internet — a national first.**

- **The City of Boston's commitment to reform the Boston Public Schools is beginning to show results.** Stricter standards, new partnerships and an exciting mix of pilot and charter schools has given new hope for academic success to many of Boston's school-aged children and their families.

Boston's challenge

Boston is poised for prosperity, but our very success presents new challenges. Boston's story risks of becoming a tale of two cities. Like the national economy Boston's economy is sharply split in its impact on more and less well-positioned residents:

- **While wages have been rising steadily for highly skilled workers, low-skilled wage earners saw their real incomes fall over most of the past three decades**. There have been only modest gains for low-skilled workers in the current economic boom. The contrasts are stark. Boston contains two of the highest-income neighborhoods in the nation in 2000, yet 70% of Boston's public school students qualify for free or reduced-price lunches, a measure of poverty.

- **Surging real estate prices and rents in Greater Boston are beginning to displace low-income families, artists and the elderly and present a potential obstacle to future economic growth.** Boston's rising cost of living and development pressures could alter the character and diversity of the city, and discourage

A Vision for the Future: Boston 400

Boston 400 is Boston's vision and plan for physical development through the year 2030, Boston's 400th anniversary. It was developed by the Boston Redevelopment Authority through hundreds of community meetings and review sessions.

A City of Neighborhoods

- **Transit-centered urban villages.** Mixed-use communities are developed and enhanced near transit stations, with welcoming entryways and crossroads.
- **Affordable housing.** Housing needs are met for all income levels and for all stages of life.
- **Charm bracelets.** Parks, schools, community centers, libraries and other civic resources are linked and enhanced with public realm improvements in all neighborhoods.

A Vital Natural Environment

- **Communities connected by water.** Public access and transportation to Boston Harbor and the city's five rivers is dramatically enhanced.
- **Parks as Boston's commonwealth.** Boston's system of parks and natural spaces is expanded, with new playing fields, fair grounds and the protection of natural areas. An adequate revenue stream supports Boston's open-space system.

A Cultural and Learning Center

- **Schools for the next generation.** New and refurbished schools make Boston's schools centers of learning and civic gathering for residents of all ages in all of the city's neighborhoods.
- **Art in public places.** Culture and the arts are present in all public spaces and places.
- **Historic preservation.** Great historic buildings and districts are preserved and integrated into the fabric of the city.
- **Cultural facilities.** A wide variety of venues offer spaces to celebrate Boston's many new forms of culture and creativity as well as traditional plays, concerts, lectures and other cultural and civic events, with multi-lingual systems of signage and orientation.

The Hub of New England

- **Hub of the hub.** Key focal points downtown are enhanced and a new generation of transit connects Boston's neighborhoods to one another and to the regional economy.
- **Designs for development.** Streetscape and urban design standards strengthen Boston's sense of community and provide an attractive setting for business and recreation.

young companies and workers from building their future here.

- **Educational, economic, and health status disparities continue to play out among racial/ethnic groups.**

- **In 1990 in Boston, the per capita income of whites was double that of blacks and Asians and more than double that of Latinos,** reflecting disproportionate educational attainment, continuing discrimination and a lack of job networks. Only 19% of white adults in Boston lacked a high school diploma in 1990 but 47% of Latino adults, 38% of Asian Americans and 33% of black Bostonians lacked this basic credential for a good job. Boston's recent MCAS results underscore continuing racial disparities. More than 84% of the students in Boston's public schools are young people of color.

- **The "digital divide" must be bridged.** According to national studies, lack of access to technology skills could have a long-term negative impact on the prospects of low-income students and workers and on the economy itself. While Boston offers increasing public access to technology resources, computer and Internet access in homes lags far behind in comparison to suburban residents. Simultaneously, good high-tech jobs are going begging from a lack of skilled workers.

- **The unmet need for English as a Second Language (ESL) and other basic adult education classes is slowing economic advancement and civic participation.** As many as 45,000 Boston residents may be linguistically isolated, and there is a six-month to three-year waiting list for enrollment in English as a Second Language (ESL) classes. State funds are needed to address this unmet need.

- **While Boston's economy is stronger and more diversified than it's ever been, it is not immune to recession.** Boston's recent prosperity rests on rapid growth in a number of "new economy" industry clusters and may be quite vulnerable to a sudden downturn.

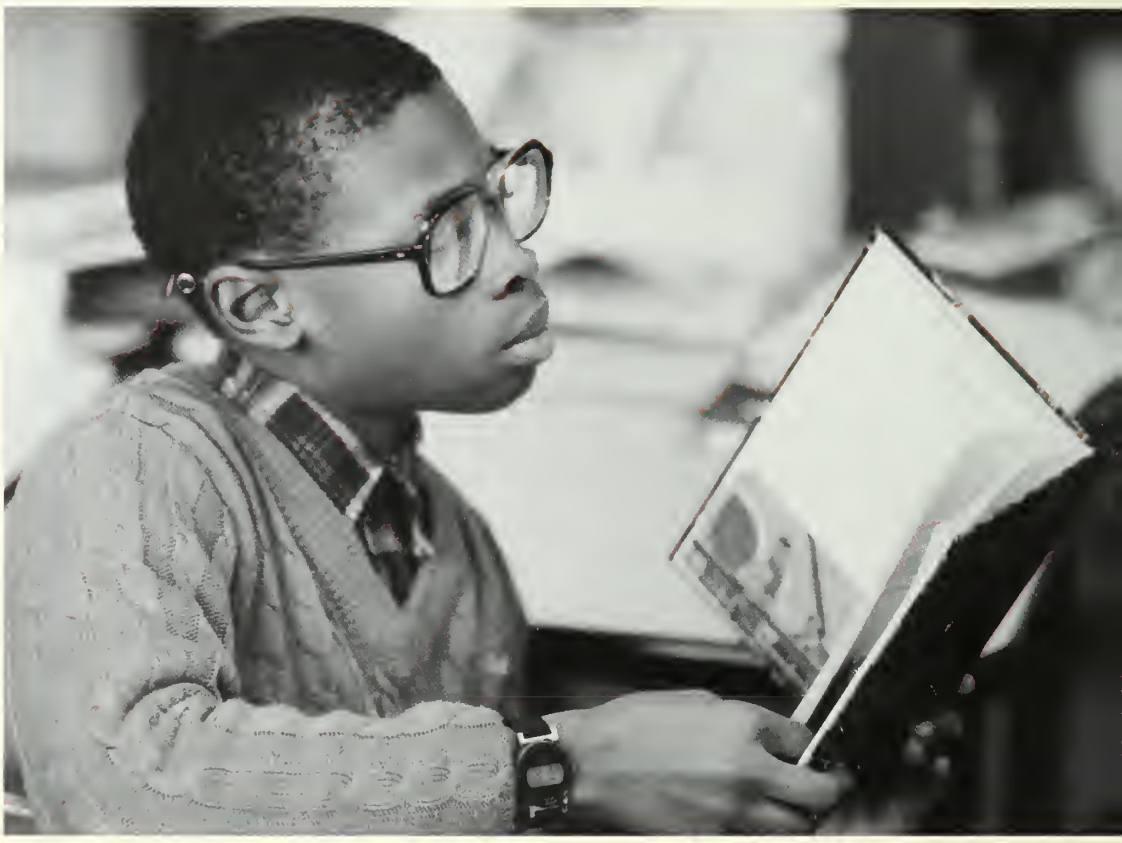
- **Bostonians need to come to consensus on a vision for the future.** A sustainable growth strategy will protect Boston's assets for future generations while allowing for continued prosperity.

Our challenge — and the challenge for the next generation — is to build on our hard-won gains to create a vision and plan for sustainable, equitable growth for the future.

Bostonians can, if we choose well, provide opportunities for all of Boston's neighborhoods and all Bostonians to succeed in this new millennium. Given our small scale and wealth of resources, we can work together to eradicate the great disparities of race and class in Boston that continue to affect too many of the city's children and families.

We can use our grasp of interwoven social, environmental and economic systems to a new and more inclusive civic agenda and create a high quality of life for all Bostonians. And we can, finally, attain that "city on a hill" envisioned by our founders — a vision remade by Bostonians today as a City for All.

Key Facts About Boston's Children and Youth



Who are Boston's Children?

- In 2000, Boston is home to about 142,000 children under age 17, according to recent estimates, an increase from about 110,000, 20% of Boston's population, at the time of the 1990 U.S. Census. Boston's youth population is expected to rise.

- Three neighborhoods together are home to 48% of Boston's children under 17: Dorchester (21%); Roxbury (17%); and Mattapan (10%). In contrast, five neighborhoods together contain less than 10% of the city's children: Fenway/Kenmore; Back Bay/Beacon Hill; Central Boston (the North End, Chinatown and the Financial District); Charlestown; and West Roxbury.

- Only 23% of all Boston households contained children in 1990, compared to 32% in 1970 (when there were about 182,000 children in Boston). Almost 50% of the city's children lived in two-parent families in 1990 (down from 75% in 1970), while 43% lived in single-parent homes (up from 25% in 1970). The remaining 7% lived in foster homes, group homes, shelters or on their own.

■ While Boston's overall population in 1990 was 41% of color and 59% white, the city's youth population was 64% of color and 36% white. Of Boston's youth of color in 1990, 59% were black, 27% Latino, 9% Asian and about 5% American Indian or Other. Boston's overall population is expected to be around 50% of color when the 2000 Census is tabulated, and to be more ethnically and linguistically diverse.

In- and Out-of-School Time

■ As of 2000, 84,000 Boston children were enrolled in school: 75% in the Boston Public Schools (BPS); 19% in parochial and private schools; and 5% in Out-of-District Public Schools.

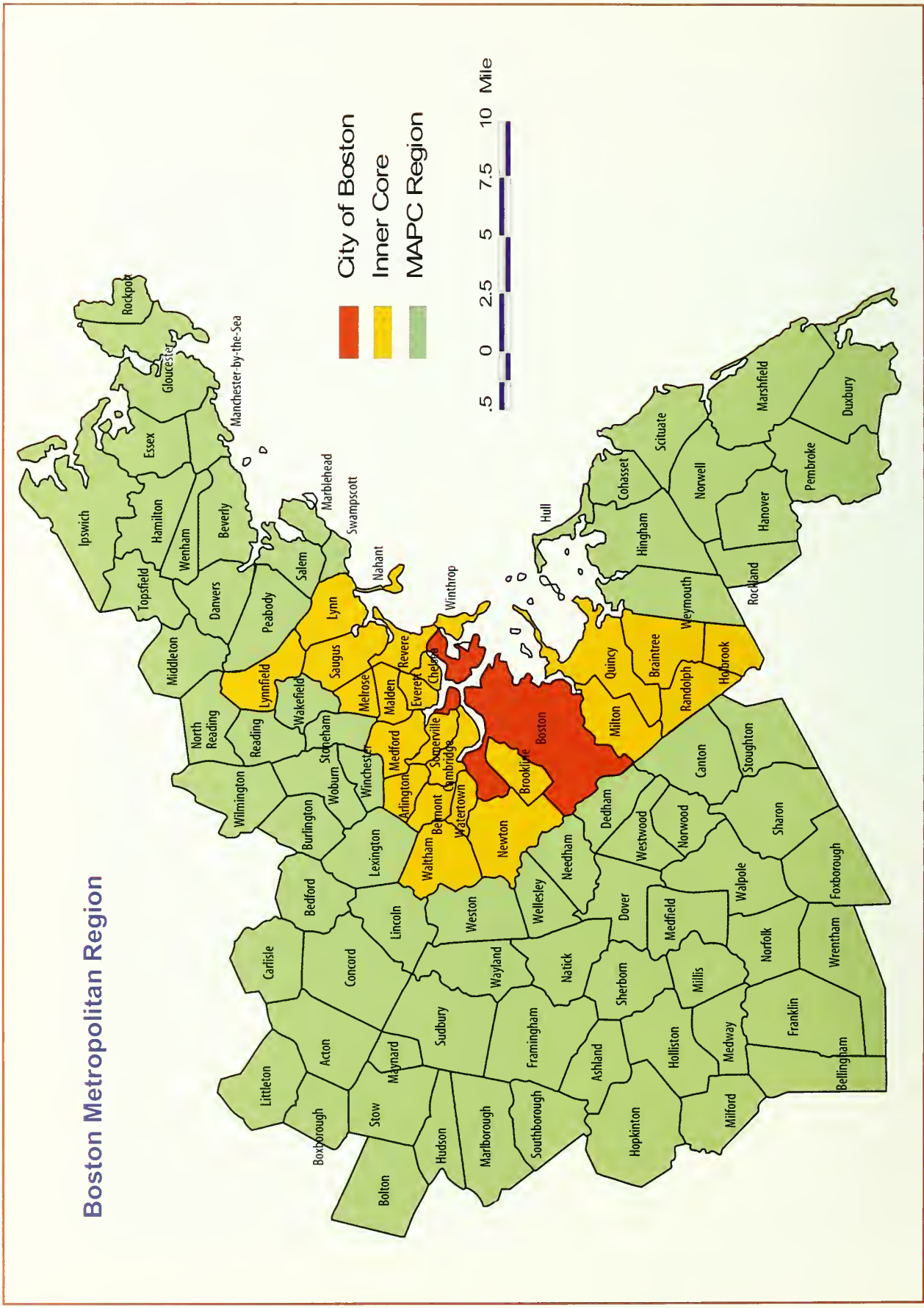
■ Dorchester and Roxbury together account for almost half of Boston's Public School enrollment.

■ According to the 1990 Census, 13,980 families with children (24% of all families) and their 30,372 children lived in poverty. In 1998, about 47,000 of Boston's school children — 72% of the total — were eligible for free or reduced-price school lunches, another measure of poverty.

■ The percentage of white students enrolled in the Boston Public Schools has dropped by more than half since 1980, while the percentage of Latinos has more than doubled. Of BPS students in 2000, about 85% were young people of color: 49% were black; 26% were Latino; 15% were white; 9% were Asian; less than 1% were American Indian.

■ Two-thirds of Boston's children aged 5–14 have parents who work and cannot care for their children themselves between the hours of 2:00 and 6:00 pm. These are the hours during which 33% of all juvenile offenses occur.

Source: "Who are Boston's Children?" Boston Redevelopment Authority, 1998.


Boston Metropolitan Region
City of Boston
Inner Core
MAPC Region
.5 0 2.5 5 7.5 10 Mile
Rockport
Gloucester
Manchester-by-the-Sea
Essex
Ipswich
Hamilton
Wenham
Beverly
Topsfield
Danvers
Middleton
Peabody
Salem
Marblehead
Swampscott
Lynn
Nahant
Lynnfield
Saugus
Winthrop
Wakefield
Melrose
Revere
Malden
Everett
Chelsea
North Reading
Reading
Stoneham
Medford
Somerville
Cambridge
Boston
Wilmington
Woburn
Winchester
Arlington
Brookline
Burlington
Belmont
Watertown
Waltham
Newton
Lexington
Bedford
Weston
Wellesley
Needham
Dedham
Westwood
Norwood
Canton
Stoughton
Sharon
Foxborough
Walpole
Medfield
Dover
Natick
Wayland
Sherborn
Millis
Norfolk
Wrentham
Franklin
Bellingham
Medway
Milford
Hopkinton
Holliston
Ashland
Framingham
Sudbury
Carlisle
Concord
Lincoln
Littleton
Acton
Maynard
Boxborough
Stow
Hudson
Bolton
Marlborough
Southborough
Hull
Cohasset
Scituate
Hingham
Norwell
Marshfield
Hanover
Pembroke
Duxbury
Rockland
Weymouth
Braintree
Quincy
Milton
Randolph
Holbrook

Our city and region are flourishing,
but our future success is not guaranteed.
To prepare for the 21st century, we must sharpen
our understanding of the interdependence
of Boston and its region.

The Regional Context

The United States government defines a metropolitan area as "a large population nucleus together with adjacent communities which have a high degree of social and economic integration with that nucleus." Since the beginning of the Industrial Revolution, Boston has been at the hub of a regional system of transportation and commerce. One out of every six jobs in Massachusetts and one out of every thirteen jobs in New England is located in Boston's city limits.

The "Boston region" is defined in a number of ways. It can mean:

- **the six states of New England**, with a total population of about 13 million;
- **the state of Massachusetts**, with about six million people;
- **the Boston Consolidated Metropolitan Statistical Area** or CMSA, which, according to the U.S. Census Bureau, runs from Worchester, Massachusetts to York, Maine, to Nashua, New Hampshire, to parts of Connecticut. With a total population of 5.6 million, it is the seventh most populous consolidated metropolitan region in the United States;
- **the Boston Primary Metropolitan Statistical Area** or PMSA, defined by the U.S. Census Bureau as encompassing 129 cities and towns in Massachusetts and two in New Hampshire, with a total population of 3.2 million;
- **the Metropolitan Area Planning Council (MAPC)s region**, encompassing 101 Eastern Massachusetts municipalities — 19 cities and 82 towns — with a total population of about three million (see map on facing page);

- **the "inner core" of the Metropolitan Area Planning Council's region,** including the 21 cities and towns immediately surrounding Boston, with a combined population of about 1.5 million people.

For the purposes of this report, the "Metro-Boston region" refers to the Metropolitan Area Planning Council's definition of the Boston region unless otherwise noted.

Historical Context

Since 1950, with the construction of Route 128/I-95 ten miles from Boston, and I-495, about thirty-five miles away, suburban communities around Boston have doubled, tripled or even quadrupled in population. Over the same period Boston' s population declined by 25%.

By 2025, the Commonwealth of Massachusetts' population as a whole is expected to grow by 800,000 or so residents, about 350,000 of whom are expected to locate in MAPC region, or in the 101 cities and towns surrounding Boston. This projected rate of growth is slow compared to the nation's high-growth regions.

Regional strengths

- **Metro-Boston has diverse local economies and includes over 1.7 million jobs, many in "new economy" growth clusters.** Five industries requiring high-skilled workers comprise the foundation of the metropolitan economy: high technology; health services; financial services; higher education; and, the "creative industries." The area's economic base is made up of industry clusters poised for growth.

- **The Boston region is still a "real place" in a world becoming more and more homogenized.** The region's heritage, its cultural offerings and growing racial/ethnic diversity generate civic pride, vibrancy and many jobs. The region contains many historic buildings and designated historic districts as well as archaeological sites documenting the region's Native American roots and the mills and factories of our industrial past. As one reflection of this cultural wealth, tourism is Massachusetts' third largest industry. The state's three Easternmost counties — Suffolk, Middlesex and Barnstable — constitute the state's largest travel market, with more than twelve million visitors in 1999.

- **Metro-Boston contains a wealth of diverse landscapes, habitat and recreational opportunities in a very small area.** These range from Massachusetts Bay, the Boston Harbor and islands to fresh-water and marine beaches, marshes, rivers and lakes, farms and forests, and landmark designs such as Frederick Law Olmsted's Emerald Necklace. The area's working farms, orchards and cranberry bogs remind us of our agricultural heritage while renowned environmental institutions plan the future. Cities and towns are also using their environmental assets to promote economic development. The North Shore Task Force recently embarked on an Environmental Tourism project with more than fifty destinations and seasonally designed tours. Inner Core communities lead in recycling "brown-

fields," industrially contaminated sites, for productive new development.

- **The region's transportation network of roads, rail, air, bicycle, pedestrian, and water facilities is vital to its economic viability.** The diverse transportation system includes major airport and port facilities, radial patterns of extensive rail transit lines and walkable central cities.

- **Fifty-one public and private colleges and universities in the region generate a supply of highly educated workers, producing research that fuels the high technology and biotechnology sectors.** They are also among the region's largest employers. Massachusetts is one of the preeminent medical research centers in the nation with an unparalleled collection of world-class hospitals, medical schools and research facilities that led the country in National Institutes of Health (NIH) grants for the past several years, with awards reaching $1 billion in 1999. Metro Boston is now considered the capital of the Northeast biotechnology industry.

Regional Challenges

- **Metro-Boston lags behind on regional collaboration compared to many other "city-states."** Many metropolitan regions — sometimes called "city-states" — are retooling their policies and systems of government to create more effective regional collaboration and partnerships. They are laying out paths for constructive dialogue and decision making, and taking stock of their strengths and challenges. Here, in contrast, political fragmentation too often results in overlapping water, sewer, electric, gas and transit services, uncoordinated and cumbersome land development decisions, and a lack of solutions to the region's most pressing challenges such as sprawl and affordable housing.

- **Despite the high proportion of college graduates in the area, many of the region's companies are facing a labor shortage, particularly of highly skilled professionals, while the region's under-employed residents lack the skills necessary to compete for these jobs.** For the past three decades, the region has been losing traditional industrial and durable manufacturing jobs that provided middle-income wages and expanded the benefits of the regional economy. As a result, the region contains a number of distressed communities with strained public budgets for revitalization, lack of economic opportunity, loss of community cohesion, and barriers to educational advancement for young people. Most of the region's lowest-income residents live in a dozen urban communities in Metro-Boston's inner core.

- **Despite the shortage of tech-savvy workers, low-income residents are much less likely than others to have access to computers, technology training and electronic infrastructure in their communities.** Other high-tech impacts, too, fall heavily on low-income residents. New technologies are leading to automated manufacturing processes that increase productivity but require fewer workers. They are also enabling companies to locate far from population centers, leading to difficult commutes for entry-level workers from urban core communities.

- **The per capita income in the region is about 36% above the national average, yet the Boston area is more than 44% more expensive than comparable regions, reflecting high housing, health care and energy costs.** While the rising cost of living is creating extreme hardship for low-wage workers and their families, it is also discouraging young high-skill workers from locating or remaining in the region. According to a report by the think tank Massachusetts Institute for a New Commonwealth (MassINC), Massachusetts' labor force grew more slowly than 46 other states' and 8% more slowly than the national average between 1990 and 1997, with many young workers leaving the state. The high cost of living also translates to high business costs, which undermine the region's ability to retain high technology ventures as they expand into manufacturing, a source of good jobs. This causes business decentralization to lower-cost regions.

- **Only eight of 101 Metro-Boston municipalities meet the state benchmark of 10% affordable housing units — an unmet goal for the past 30 years.** At the same time, housing costs are skyrocketing. High housing costs are

Sprawling Massachusetts

Massachusetts is "sprawling" at an alarming rate. According to a recent report by the Civic Initiative for a Livable New England sponsored by the Boston Society of Architects, a local chapter of the American Institute of Architects, and the local chapter of the American Planning Association, the Boston region is "driving itself crazy…."

Between 1970 and 2000, total annual miles traveled in Massachusetts increased by nearly 75% while the population increased by only about 10%. Tougher automobile emission standards were enacted in that period, but their impact was offset by the number of vehicle miles driven, and half of the region's air pollution now comes from local automobile use.

In another measure of sprawl, almost 50% of Massachusetts' farmland was replaced by development between 1950 and 2000. Developed land in the region contains less than half the population density (about five persons/acre) than in 1950 (11 persons/acre).

Sprawling development is also putting pressure on the region's water supply. With less open land to absorb rain water and replenish water tables, water demand within the I-495 area is expected to exceed supply within ten years. Run off from paved or built surfaces, moreover, is now the primary source of water pollution problems in New England.

For more information contact: The Civic Initiative for a Livable New England, Boston Society of Architects.

displacing many long-time and low-income residents and forcing them into overcrowded conditions or homelessness. The region has a strong network of housing organizations and community-based developers, and a legacy of innovative programs. However, little new affordable housing is being built, and existing affordable housing is at risk due to expiring use restrictions and a decade-long decline in public funding at the state and federal level.

- **Many of the region's schools are under performing despite seven years of education reform**. Failure to improve educational outcomes will be a severe drag on the region's economy and a lost opportunity for the Commonwealth's economically disadvantaged populations. The cost of college is also an impediment to many, and job training programs are generally under funded and scattered across many agencies. Ladders of opportunity for advancement — from basic adult literacy and English as a Second Language (ESL) classes to community college and university systems — are needed to train the regional workforce for good 21st century jobs.

- **Disparities in educational attainment, health and economic status continue to disproportionately affect newcomer immigrants, people with disabilities and people of color in the region.** The region's growing diversity has stepped up the challenge of overcoming racial discrimination and other barriers to achieving equitable opportunities for all. Local governments may also need to experiment with new forms of civic deliberation to achieve a inclusive civic participation.

- **More than 90% of Massachusetts' residents reported access to a health plan in 1997; geographic pockets of poverty correlate with racial/ethnic and other disparities in health care access and health outcomes.** The region's health care sector has also faced tremendous challenges in the last few years as health care centers and health maintenance organizations (HMOs) struggle for survival, along with many hospitals. Changes underway in the health care industry need to be managed effectively while offering high quality health care to all.

- **Towns within the region lack adequate infrastructure to support economic or population growth without undermining the environmental quality of life.** The Proposition 2 ½ property tax cap requires that local land development decisions be based on revenue from new construction, often at the expense of environmental protection and infrastructure investment. Only one-third of the region's rivers meet their water quality standards under the Federal Clean Water Act, and many outlying towns lack adequate sewer and water resources.

- **The region is in non-attainment of the Clean Air Act's standard for ozone**, reflecting worsening traffic congestion and air pollution, primarily due to mobile sources. Urban sprawl is forcing longer commutes while distancing urban workers from new entry-level and other jobs. In 1990, despite the region's relatively good public transportation system, of about 500,000 daily commutes, 224,000 took place in cars driven by one person.

- **Much of the region's transportation system is old and in need of repair, and the Big Dig is requiring a vastly disproportionate share of transportation resources**. Many towns lack direct highway or public transportation access to major job centers.

- **Unlike many other states, Massachusetts lacks comprehensive policies to support its cultural sector**. This may leave Greater Boston vulnerable to more aggressive regions. For example, Providence, Rhode Island, and the state of Vermont are actively courting artists as a vehicle for community development and tourism. State policy affects cultural life in areas such as housing for artists, arts and music programs in the schools, bilingual signage, inclusive design, historic preservation and funds for public art in the public realm.

A number of initiatives are beginning to confront the need for regional solutions to these regional challenges. The Metropolitan Affairs Coalition, a consortium of organizations coordinated by the Metropolitan Area Planning Council, is providing an umbrella for dialogue on regional issues, developing a common agenda and a set of regional indicators in accordance with updating its comprehensive plan for the region. Northeastern University recently established a Center for Urban and Regional Policy, which is collaborating with the Boston Archdiocese on solutions to housing affordability in the region. Housing is also a focus of the work of the Greater Boston Interfaith Organizing Initiative, which is bringing together the members of congregations throughout the region. The Boston Society of Architects, a local chapter of the American Institute of Architects, has kicked off a three-year Civic Initiative for a Livable New England to focus public attention on "sprawl" and related issues and to mobilize the public, municipal leaders, planners and design professionals to come together to develop solutions.

Metro-Boston Indicators*

Indicators	Measures	How Is Metro-Boston Doing?
CIVIC HEALTH		
High Voter Participation	■ Voter participation vs. voter registration by community	■ Voter participation dropped about 8% between the last two presidential and gubernatorial elections, with steepest declines in the affluent towns of Hingham and Holliston
Local Ownership	■ Percentage of owner-occupied structures by community	■ Homeownership rates range from 93% in Lynnfield and Wilmington to 30% in Cambridge
Diversity	■ Racial diversity by community	■ Metro-Boston is about 80% white, with rapidly growing minority populations
ECONOMY		
Low unemployment	■ Unemployment rate by community	■ The region's unemployment rate is 2.6%, a record low
Adequately Prepared Workforce	■ Educational attainment by community	■ 40% of residents 25 years and older have a college degree, ranging from 76% in Weston to 17% in Chelsea and Everett.
	■ Number of communities offering ESL and Adult Basic Education classes	■ 30% of communities offer immigrant education programs; many have long waiting lists.
Family Self-Sufficiency	■ Percentage of households with families below the Self-Sufficiency Standard by community	■ 75% of households in the region earn enough to be self-sufficient; 25% have incomes that do not cover living costs.
EDUCATION		
High Academic Achievement for All	■ Percentage of third graders reading at grade level	■ In 90% of municipalities, two-thirds or more 3rd graders are proficient or advanced readers; Boston and inner core average at about 35%
Higher Education Opportunities	■ Percentage of high school graduates planning to go to college by community	■ In most communities, over 70% of high school graduates plan to attend college; Boston is the only community with less than 50%
Quality School Culture and Environment	■ Public funding per student vs. test scores by community	■ Generally, wealthy school districts with the most public funding per student have the highest proportion of 4th, 8th and 10th graders at proficiency or above in English, math or science

Indicators	Measures	How Is the Region Doing?
ENVIRONMENT		
Clean Water	■ Percentage of rivers meeting water quality standards	■ Only 30% of regional river miles fully meet federal water quality standards; nearly half fully fail
HOUSING		
Affordable Housing	■ Number of municipalities with at least 10% subsidized housing units	■ Only eight communities have reached the state's benchmark of 10% for subsidized housing units; Boston leads with 19.2%
	■ Number of municipalities with Section 8 Housing units	■ 42% of municipalities have no Section 8 housing units
PUBLIC SAFETY		
Low Crime Rates	■ Trends in reported criminal activity by community —violent crime (murder, rape, robbery, aggravated assault) —property crime (burglary, larceny, vehicle theft, etc.)	■ Between 1995 and 1998, total crimes, violent crime and property crimes decreased, with a drop for Boston. About 20% of suburban communities saw an increase in violent or property crime
TECHNOLOGY		
Use of Technology for Teaching and Learning	■ Number of students per computer in public schools by community	■ 47% of public schools have fewer than the statewide average of 10.6 students per computer
	■ Percentage of classrooms wired for Internet access by community	■ About 60% of municipalities have wired more than half of their classrooms for Internet access
TRANSPORTATION		
Environmentally Sound Transportation System	■ Vehicle ownership vs. transit-user households by community	■ Nearly 80% of households in the region own one or more vehicles. Affluent communities have nearly 100% household vehicle ownership; in Inner Core communities, about 30% of households depend on public transit
	■ Vehicles miles traveled vs. population growth	■ Vehicle miles traveled are increasing much faster than the population indicating sprawl. By 2020, vehicle miles traveled are expected to increase by 26% but the population by only 5%.

* Metro-Boston is defined as the 101 Cities and Towns included in the Metropolitan Area Planning Council's region of Eastern Massachusetts (see map on page 26)

AT A GLANCE

Boston

	1980	1990	Most Recent Estimates*
Total Population	562,994	574,283	591,262 2000 est. 600,450 2010 est.
Land Area: 48 Square Miles			
Population by race			
White	393,937 70%	360,862 63%	314,842 1995 est.
Black	126,229 22%	146,964 26%	140,281 1995 est.
Asian or Pacific Islander	15,150 3%	30,338 5%	36,339 1995 est..
Native American Eskimo	1,302 <1%	1,884 <1%	–
Other	26,376 5%	34,196 6%	–
Hispanic origin	26,068 5%	61,958 11%	72,869 1995 est.
Population by age			
0–5 years	30,118	36,601	38,445 1998 est.
5–19 years	120,780	73,232	105,414 1998 est.
20–64 years	340,797	393,494	394,449 1998 est.
65 years and older	71,299	65,949	53,253 1998 est.
Population by gender			
Male	265,562	274,259	–
Female	297,468	300,024	–
Number of Households			
Family Households (with children under 18 years)	116,374	117,648	–
Married Couples/Families	33,622	30,061	–
Single-Parent Families	24,727	23,301	–
Non-Family Households	102,083	101,301	–
Median Household Income	$12,539	$29,179	$39,987 P-Census
Median Home Price			
Single Family	–	$139,050	$179,500 (1999)
Two Family	–	$167,000	$190,500 (1999)
Median Rent			
Two-bedroom unit	–	$670	$1,550 (1999)
Percent in Poverty	**20.2%**	**18.7%**	–

*** Population, race and age estimates provided by the Metropolitan Area Planning Council.**

Source: Boston Redevelopment Authority; Department of Neighborhood Development.

AT A GLANCE

Boston Neighborhoods

Neighborhood	Population	Population Under 17 years	Median Household Income
Allston/Brighton	70,284	6,866	$29,348
Back Bay/Beacon Hill	27,715	1,195	$38,348
Central Boston	21,700	1,642	$30,061
Charlestown	14,718	2,405	$35,706
Dorchester	85,806	22,734	$29,887
East Boston	32,941	6,663	$22,925
Fenway/Kenmore	32,833	1,296	$18,645
Hyde Park	30,063	6,680	$35,916
Jamaica Plain	41,112	8,583	$29,864
Mattapan	36,084	11,073	$29,316
Roslindale	32,983	7,147	$34,211
Roxbury	58,759	18,369	$20,518
South Boston	29,495	5,360	$25,539
South End	28,759	4,998	$27,157
West Roxbury	29,716	4,702	$39,509
Boston Total	**574,283**	**109,833**	**$29,179**

Source: Boston Redevelopment Authority; 1990 U.S. Census.

AT A GLANCE

Metro-Boston Inner Core

(2000 estimates*)

MAPC Inner Core	Population	Population under 19 Yrs.	Median Family Income**
Arlington	43,494	7,228 17%	$ 43,309
Belmont	24,941	5,661 23%	$ 53,488
Boston	594,898	142,609 24%	$ 29,180
Braintree	34,872	7,909 23%	$ 44,734
Brookline	58,072	11,691 20%	$ 45,598
Cambridge	99,524	21,291 21%	$ 33,140
Chelsea	31,822	10,181 32%	$ 25,144
Everett	35,097	8,457 24%	$ 30,786
Holbrook	11,149	2,664 24%	$ 37,775
Lynn	83,794	24,881 30%	$ 28,553
Lynnfield	11,937	3,219 27%	$ 58,561
Malden	54,129	12,964 24%	$ 34,344
Medford	58,296	13,059 22%	$ 38,859
Melrose	27,861	6,339 23%	$ 44,109
Nahant	4,014	806 20%	$ 47,212
Newton	81,747	20,997 26%	$ 59,719
Quincy	87,299	19,037 22%	$ 35,858
Randolph	32,068	8,435 25%	$ 43,244
Revere	43,222	11,166 26%	$ 30,659
Saugus	26,367	5,995 23%	$ 41,919
Somerville	78,135	14,476 19%	$ 32,455
Waltham	58,908	13,373 23%	$ 38,514
Watertown	32,875	6,473 20%	$ 43,490
Winthrop	17,703	3,725 21%	$ 37,240

* Yr 2000 figures from MAPC and Massachusetts Institute of Social & Economic Research

** Median Family Income figures from U.S.Census and HUD

AT A GLANCE

The Metro-Boston Region

	1980	1990	2000 est.
Population			
City of Boston	562,994	574,283	591,262
Metro-Boston Inner Core 21 cities and towns surrounding Boston	1,585,906	1,590,726	1,632,224
Metro-Boston Region 101 cities and towns surrounding Boston	2,884,712	2,922,934	3,021,014
Land Area: 1,404 Sq. Miles			
Population Density (people/sq. mile)	2,055	2,082	2,152
Population by race			
White	2,606,893 90.3%	2,492,900 85.3%	2,481,104 82.0%
Black	155,547 5.4%	192,046 6.6%	210,581 7.0%
Asian or Pacific Islander	37,645 1.3%	93,842 3.2%	138,007 4.6%
Native American Eskimo	–	4,032 0.1%	–
Other	16,459 0.6%	8,835 0.3%	–
Hispanic origin	68,168 2.4%	131,009 4.5%	191,322 6.3%
All minorities	277,819 9.6%	430,034 14.7%	539,916 17.9%
Population by age			
0 – 4 years	152,353	186,170	183,219
5 – 17 years	553,836	409,335	591,503 (5– 19 years)
18 – 64 years	1,819,383	1,939,789	1,874,681 (20– 64 years)
65 years and older	359,164	387,640	375,521
Population by gender			
Male	1,367,238	1,397,217	1,465,139
Female	1,517,883	1,525,717	1,555,875
Total Households	1,035,330	1,111,708	1,184,204
Family Households (with children under 18 years)	704,639	711,138	–
Married Couples/Families	561,462	542,461	–
Single Parent Families	143,177	168,677	–
Non-Family Households	330,691	400,570	–
Median Household Income	$ 22,848	$ 49,266	$ 62,700 (1999)
Median Home Price	$ 56,000	$ 174,000	$ 235,000 (1999)
Percentage in Poverty	9.3%	8.4%	–

Source: Population, race and age figures and estimates provided by the Metropolitan Area Planning Council.

SECTION ONE

Civic Health

Vision

A welcoming community with strong, supportive social networks, mutual respect across group boundaries and many opportunities for participation and engagement in civic affairs.

Indicators of Civic Health	Measures	How Is Boston Doing?
1.1 **Civic Involvement**	■ Number of neighborhood associations and organizations by neighborhood	■ Data not available at this time
	■ Volunteer activity in Boston	■ In 2000, Read Boston volunteers tutored over 2000 children
	■ Percent of youth who feel connected to the community	■ In 1999, 60% of Boston youth surveyed reported volunteer activity. 6,000 youth had adult mentors
	■ Charitable donations by neighborhood	■ Giving was highest in 'other charitable donations' category. Central Boston led in political donations
1.2 **High Voter Participation**	■ Total voting population 18+ years vs .registered voters and voter participation rates in Boston	■ In 1999, of the 464,829 voting age Boston residents 51% were registered to vote. The average voter participation rate is about 30%
	■ Voter participation rates in local and national elections by neighborhood	■ Bostonians vote more in presidential elections, less in local elections. Neighborhood voting rates vary
1.3 **Stability and Investment within Neighborhoods**	■ Percent of people living at the same address by number of years, by neighborhood	■ 1990 data showed many long-term renters and owners. Current housing costs may have shifted this balance
	■ Changes in property value by neighborhood	■ From 1998–1999 home values grew overall: 3-family: 22.5%; 2-family: 12.3%; 1-family: 15.6%; condos: 6%
1.4 **Local Ownership**	■ Number of owner-occupied structures (1–6 family) by neighborhood	■ 1990 census data indicate 70% of Boston's 1–6 family residential structures are owner-occupied
	■ Percent of local businesses owned by women and minorities by neighborhood	■ Minority and women enterprises do not reflect Boston's demographics
1.5 **Civic Confidence**	■ Percent of residents who trust their neighbors, by neighborhood	■ In 1999, 80% of Boston residents surveyed trusted their neighbors
1.6 **Healthy Race Relations**	■ Percent of minority professionals and managers in private industry by race	■ Minorities represent a total of 10.9% of all professionals and 6.2% of all managers/officials in private industry
	■ Citywide hate crimes	■ See Public Safety section
	■ Degree of racial integration in Metro-Boston and by Boston neighborhood	■ While many Boston neighborhoods are racially segregated. Boston is among the most racially integrated communities in Metro-Boston
1.7 **Welcoming, Inclusive Environment**	■ Percent of accessible public buildings	■ Data not available at this time
	■ Multi-lingual capacity in major public institutions and places	■ Sample survey shows growing multi-lingual awareness.

Civic Health

Measured against most other American cities, Boston has an unusually high level of civic engagement.

Historical Context

Massachusetts' Puritan founders established the town meeting, an innovative form of democracy and decision making, in the 17th century. This was not unlike the tribal councils of the Massachusetts Indians whose land they had appropriated.

In the 18th century, Bostonians began to found organizations and associations that brought like-minded people together to further a range of interests and causes. In fact, the success of Paul Revere's mobilization of the Massachusetts Bay citizenry on the eve of the American Revolution is credited by Malcolm Gladwell, author of "The Tipping Point," to Revere's stature and connections as a respected member of numerous civic organizations.

Boston's early African-American residents founded the African Society, which was first organized to abolish slavery and later became a mutual aid and charitable organization. In the 19th century, Irish immigrants used electoral politics to advance their interests. With other newcomers, they developed strong networks of mutual support in church parishes as they moved into Dorchester, Roxbury, and South Boston. Later, Italians and Russian Jews in the North and West End — along with Chinese in Chinatown and Lebanese, West Indians and Puerto Ricans in the South End — contributed their traditions of civic activities to Boston's dense social fabric. As Boston annexed adjacent municipalities, these groups moved further into Boston's new neighborhoods, creating enclaves of mutual support and commerce.

However, following World War II, Boston began to lose population as young families, many headed by returning soldiers eligible for subsidized mortgages, moved to new suburbs on the outskirts of Boston. As the city's population and prospects shrank institutional disinvestment strategies such as redlining (the refusal to make loans in a targeted area) and block busting (racial steering and the churning of residential housing) created a cycle of deterioration. The people leaving Boston were mostly white, and many of the city's newer residents were people of color from the rural American South and Puerto Rico seeking jobs in Boston's factories. Even as they began their new lives, the city's neighborhoods were deteriorating.

In 1954, Boston College initiated the Boston Citizens Seminar, designed to bring leaders of the city together to plan for the future. Out of these seminars grew a vision for Boston as a new center of financial services and commerce. The seminars were able to transcend a century-old division between Boston's old Yankee leadership and newer Irish leaders. The first major new building in 50 years, the Prudential Center, was constructed, and the City set up the Boston Redevelopment Authority to develop plans for urban renewal. But, with a continued population exodus to the suburbs and institutional disinvestment undermining Boston's neighborhoods, the city's civic health was in decline.

By the mid-1960s, Boston's tax base had dropped, its credit rating was at a record low and its social fabric had begun to tear visibly, undermining the dreams of old and new residents seeking stability for themselves and their families. Urban renewal plans and clearance, such as the demolition of the West End and parts of the South End, fueled tensions. Riots in other neighborhoods followed the assassination of Martin Luther King, Jr., in 1968.

The late 1960s and 1970s were a difficult time for American cities. Many central cities were so neglected that residents and experts alike began to think that the death of an urban neighborhood was part of a natural cycle. The civic health of Boston worsened. School desegregation battles, forced into the open by a lawsuit by black parents seeking schools of equal quality to those of white children, reinforced distrust, racial and geographic boundaries, and political cynicism. More residents fled to the suburbs, including many participating in "white flight." With a weakened infrastructure, a number of neighbor-

hoods were blighted with daily arson fires, some set by desperate owners or by speculators to gain insurance money. As a result, tens of thousands of vacant house lots left blocks full of "missing teeth" that began to be used as dumping sites for debris and garbage. Commercial traffic and property values in many neighborhoods fell dramatically as crime rates rose.

Boston was pulled from the brink of disaster by civic action. People across the city, in every neighborhood and every sector, looked into the chasm of hate, violence and deterioration and committed themselves to creating a different future for Boston.

Civic associations fought for control of urban renewal plans. Coalitions formed to stop new highway construction through the city core. Housing activists sought to add affordable units to comprehensive neighborhood plans and to reclaim vacant land. Activist residents founded health care centers, revived old settlement houses and created new mutual aid societies; they organized youth programs, art centers, community gardens and sports leagues. Many of the civic associations and community-based organizations, health centers and development corporations organized in the mid to late 1970s are still at work in Boston today.

This kind of civic action, engagement and leadership had long characterized Boston's history. It has come to be called "social capital" through the work of Robert Putnam, a professor at Harvard University, who has studied this phenomenon and documented its importance to the economic success of cities, towns, and nations.

Regional context

Residents of Greater Boston have long been known for strong identification with their cities and towns, and a high degree of civic participation. Metro Boston is equally well known for the lack of coordination and collaboration among municipalities.

While Massachusetts retains its reputation as the state where the town meeting style of government was born, attendance is down in many communities and voter participation rates throughout the state are down in both state and national elections.

In 1960, more than 63% of eligible voters in Massachusetts participated in the national election, and almost 76% participated in state elections. By 1996, participation had dropped to 49% in the national election and to 55% in state elections.

In fact, for both the presidential and gubernatorial elections between 1992 and 1996, all 101 cities and towns in Boston's Metropolitan area showed a decrease in voting rates — some by as much as 15%. Higher-income communities experienced the sharpest decreases overall.

In a countervailing trend, residents of the region seem more willing than ever to consider broad-based — even collaborative — solutions to shared local challenges. This is expressed in collaborative governmental initiatives and public-private partnerships such as the new Boston Harbor Islands National Park. Broad faith-based organizing efforts such as the Greater Boston Interfaith Organization (GBIO) and Cooperative Metropolitan Ministries (CMM) are focusing on solutions to the regional housing crisis. The Metropolitan Affairs Coalition (MAC), the Boston Society of Architects, Northeastern University's Center for Urban and Regional Policy and the Massachusetts Institute for a New Commonwealth are all bringing people together from throughout Greater Boston to focus on regional issues such as workforce development, suburban sprawl and housing affordability. Regional coalitions are also tackling issues of child well being, access to health care, school reform, and other pressing issues.

Citywide context

A renaissance of community activism and citizen engagement has blossomed in Boston, along with the notion, spreading throughout the country, that urban neighborhoods can be excellent places in which to live.

Boston is well known for its effective public/private partnerships in a variety of areas. These include, among others: the Boston Private Industry Council, with its focus on school reform and school-to-work advancement through the Boston Compact; the Boston Higher Education Partnership, raising funds for scholarships; the Boston Coalition Against Drugs and Violence, helping to coordinate services and strategies; the Boston 2:00 to 6:00 Initiative, developing a strong network of opportunity for young people in after-school time; the Boston Home Certificate Initiative, a partnership of the city and 26 private lenders — and many more. The City of Boston seeks to stimulate and strengthen these efforts and others through its Office of Community Partnerships, the Safe Neighborhoods Initiative, Community Centers programs and a host of special events and initiatives.

Likewise, civic activity in Boston is supported by a strong and increasingly collaborative philanthropic sector. This sector provides more than $100 million annually in private funds and donations to support nonprofit cultural and civic activities, social services, and community development at every level of community life.

Boston, long an exporter of political expertise and leadership, is in the forefront of the national community building movement. Visitors arrive from throughout the nation and the world to see what Bostonians have achieved in the fields of crime prevention, neighborhood business district revitalization, youth development, public health outcomes, and the use of shared data to measure change. These successes are all characterized by comprehensive, collaborative strategies that build on Boston's particular strengths and resources. Boston was rightly called "resource rich and collaboration poor" for many years, but this civic culture is changing.

Despite its dense civic infrastructure, however, Boston continues to struggle with issues of racial and class divisions and intolerance.

Another focus of concern is Boston's declining voter participation rate. In the 1997 City Council election, fewer than 30% of Boston's 235,940 registered voters cast ballots. In 1998, fewer than 50% voted in state and federal elections — a record low. According to the Boston Globe newspaper, voter participation in Boston is lowest among residents under 30 and highest among those over 55. To address this, many support a proposal to create a Boston Commission on Civic Involvement and Voter Participation. The commission would review voter and civic participation rates and develop strategies to increase them, especially among younger Bostonians. Suggestions include balloting by mail, ATM or the Internet and Saturday election days. In 2000, a number of groups have joined forces to register voters through the block-by-block Boston Vote initiative.

Neighborhood context

More and more people in Boston are actively working on the health of their neighborhood. Health centers, youth agencies and community development corporations established to fight the crises of the 1970s have been joined by neighborhood and block associations, pilot and charter schools, faith-based coalitions, tenant associations, youth-led organizations, conflict resolution groups, leadership development initiatives, immigrant groups' mutual aid societies, parenting groups, crime watch groups, computer centers, networks of grandparents raising their children's children, micro-enterprise support groups and many others. These groups are evolving to be more inclusive and more comprehensive, linking together in multi-cultural, multi-issue, and multi-neighborhood coalitions and strategies.

Boston has more neighborhood associations and nonprofit organizations per capita than most cities, giving citizens a solid framework within which to get involved in the civic process and express commitment to their communities. In 1999, for example, the number of crime watch groups in Boston topped 1,000 — despite the lowest level of serious crime in 30 years. Neighborhood activity and debate are also nurtured by a strong network of community newspapers.

Every Boston neighborhood expresses its civic engagement somewhat differently. The fabric of Boston's civic health is a complex quilt of neigh-

borhood tradition, innovation, organizing and celebration: the Friends of the Boston Public Garden in Beacon Hill/Back Bay; the sports leagues and youth groups of Dorchester; the Wake Up the Earth Festival in Jamaica Plain; family promenades around Castle Island and the Saint Patrick's Day Parade in South Boston; voter registration drives, Sunday church services and golf on summer days in Roxbury; banquet season in Chinatown; saint-day festivals and corner side chats in the North End; the massive West Indian and Puerto Rican Festivals in Franklin Park; the Dorchester Day Parade. Health fairs, jobs fairs, and hard-working committees flow through libraries, schools, churches, synagogues, and mosques throughout the year.

Increasingly, residents of Boston's neighborhoods are organizing and celebrating together. Faith-based and other coalitions and initiatives are helping to break down stereotypes, historic animosities, discrimination and misunderstanding. And increasingly, these efforts are moving from dialogue to action.

Boston is both a small city and a city of neighborhoods. After five or twenty or forty years on a street — despite or perhaps even because of a neighborhood's battles and travails — residents develop bonds of familiarity and shared memories that become, over time, an invisible badge of belonging. It is these bonds that people refer to when they talk about the sense of community in so many of Boston's neighborhoods — a priceless treasure and resource that has seen the city through many hard times. It is ironic that in these good times, Boston's civic fabric may face its most daunting challenge. Many Boston residents who have contributed years of hard work and devotion to improving their neighborhoods are now struggling to keep pace with the city's prosperity and the rising cost of living.

Remaining Challenges

- **If social capital is defined as the relationships among people — the "glue" of a community — unmitigated economic success could lead to Boston's civic impoverishment.** Boston's hot real estate market threatens to displace many longtime residents. Many of the gains in Boston over the past decades in revitalizing neighborhoods, building housing, improving the parks, saving historic buildings from destruction, enhancing neighborhood business districts, and holding Boston to a human scale — resulted from committed and persistent civic action on the part of neighborhood residents. We have a responsibility to ensure that residents who worked for their neighborhoods' improvement are not forced out by rising housing costs.

- **Boston's civic debates are shaped by differences in the perceptions of the city's various racial/ethnic and income groups.** These differences in outlook reflect very real disparities in life opportunities and outcomes, as shown throughout this report. Unless these disparities are addressed in open and honest dialogue followed by action, deep consensus on Boston's most pressing challenges and opportunities will elude us.

- **Boston retains its national reputation as an unwelcoming city for people of color, impeding the recruitment and retention of professionals of color.** The Partnership, Inc., a nonprofit organization that seeks to increase the diversity of staffs and boards of corporations, has established benchmarks to chronicle the successes and challenges of African American professionals in Boston. Its 2000 report, "State of African American Professionals in Boston," finds that while diversity in the workplaces of Boston is increasing, the ratio of African American to white executives has declined. It also reports that "there are on average 8.5 corporate board seats per company on the BBJ (Boston Business Journal) top 100 companies. Of the roughly 850 board members, 91% are men and 9% are women. Some 95.3% are white, 2.2% African American, 0.7% Hispanic, and 2.1% Asian American."

- **Attachment to place generates a high level of civic involvement but can also create turf problems.** Boston's sometimes extreme civic and neighborhood pride can be a double-edged sword. Bostonians now report feeling safer than most suburbanites, but many Boston residents do

not feel safe in all neighborhoods of the city, and many suburbanites do not feel safe coming to Boston. Greater Boston's neighborhood and municipal boundaries are becoming more permeable, but much work is needed to enhance our ability to work together across a narrow identification with place, race, class and sexual orientation.

- **Hate crimes are holding steady in Boston at a time when the crime rate overall is falling.**

- **Full and effective civic participation in the Information Age requires access to the Internet and the ability to turn data into information and then shared knowledge.** Bridging the digital divide may have as great a beneficial impact on Boston's civic engagement as on educational and economic advancement.

- **The sustained health of Boston and its neighborhoods depends not only on the number and variety of civic groups but on their efficacy.** Public policy often exerts a great impact on the civic health of a neighborhood, city or region, but there is often a disconnect between a community's ability to organize itself internally and its ability to affect external decisions. Capacity building and organizing on the part of residents, community-based groups and institutions will increase their effective inclusion in philanthropic, city, state, and federal policy formulation.

- **The civic community in Boston must strengthen efforts to involve and train young people and newcomers as leaders of the future.** The struggle to revitalize Boston and its neighborhoods has spanned much more than one generation. Gains made in Boston's civic health today must have the capacity to reach well beyond the current economic boom and well beyond the current generation and pool of leaders. This will happen only if all young people are well prepared to be active citizens.

Civic Health Indicators

1.1 Civic Involvement

A healthy community has an active citizenry. In neighborhoods, local communities and cities all across America, citizens are coming together to solve the problems of their communities. The interactions of individuals, families, local associations, organizations, and institutions are producing outcomes that develop trust, empower residents, increase neighborliness, generate hope and optimism, and strengthen the social fabric and effectiveness of communities.

The level of civic engagement in a community is a reflection of how involved people feel, and how they act toward each other. Lack of civic action conveys that either the community is completely satisfied with the state of affairs or that it lacks confidence in its effectiveness. The more we engage in civic affairs, the more likely we are to take responsibility and produce tangible improvements and even donate to charities and causes. Civic involvement can take several forms — volunteering for specific projects, local problem-solving through participation in committees and meetings to address concerns, charitable giving, membership support and, almost impossible to measure, informal neighborliness, which provides safety on the street, help to seniors and young people, and a sense of stability.

Number of neighborhood associations and neighborhood-based organizations, by neighborhood

PARTICIPATION IN CIVIC AND COMMUNITY EVENTS REFLECTS BOSTON'S WEALTH OF SOCIAL CAPITAL .

NO RELIABLE COMPREHENSIVE LISTING OF ORGANIZATIONS IS AVAILABLE AT THIS TIME.

What does this mean?

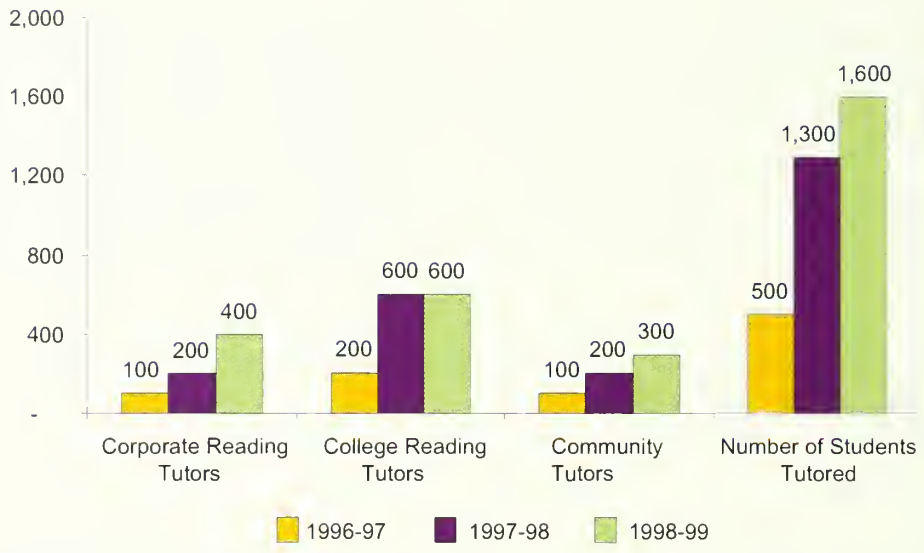
Boston has a wealth of "social capital," from youth organizations, little leagues and block associations to religious institutions, community development corporations and advocacy groups. These associations and organizations have a long history of civic action in Boston. In more recent years, many individuals and community groups have been outspoken and successful in both creating needed resources and opposing unhealthy facilities in their neighborhoods. Bostonians have also become increasingly active in community organizations, creating a vision of what they want for their neighborhoods and taking appropriate action to steer results in that direction.

While there are many lists of organizations engaged in civic activity, no reliable, comprehensive listing of organizations is available at this time.

Volunteer activity in Boston at Read Boston

VOLUNTEERISM IN THE READ BOSTON PROGRAM GREW 350% FROM 1996 TO 2000. OVER 2,000 CHILDREN WERE TUTORED.

Read Boston Program volunteers and number of students tutored 1996–1999



Source: Read Boston Program, City of Boston

What does this mean?

A 1997 nationwide poll by the American Association of Retired Persons suggests that the average American belongs to 4.2 volunteer groups. In Boston, people of all ages, income groups, and races are actively engaged in volunteer efforts. Examples of these activities range from City Year's Serv-a-Thons, parent councils, tutoring in Boston's schools, neighborhood cleanups, crime watch groups, Parks Partner activities, arts festivals and celebrations, as well as membership on neighborhood boards and committees.

Read Boston, selected to illustrate the spirit of volunteer activity in Boston, aims to help all third graders in the Boston public schools read at grade level by the year 2003. Third graders' reading ability is a strong indicator of future academic success. The rapid increase in the number of Read Boston volunteers is indicative of the capacity of Bostonians to mobilize and have an impact on a particular issue of concern — in this case, public education and the success of Boston's children. In the 1998–1999 and 1999–2000 school years, 1,750 Read Boston volunteers, including corporate workers, community members and college students, helped more than 2,000 children improve their reading skills.

Percent of youth who feel connected to the community

60% OF YOUTH SURVEYED REPORTED VOLUNTEERING AND ENGAGING IN COMMUNITY SERVICE IN THE PRIOR SIX MONTHS. 6,000 YOUTH ARE CURRENTLY ENROLLED INA FORMAL MENTORING PROGRAM.

Source: Office of Community Partnerships, Health & Human Services Cabinet, City of Boston

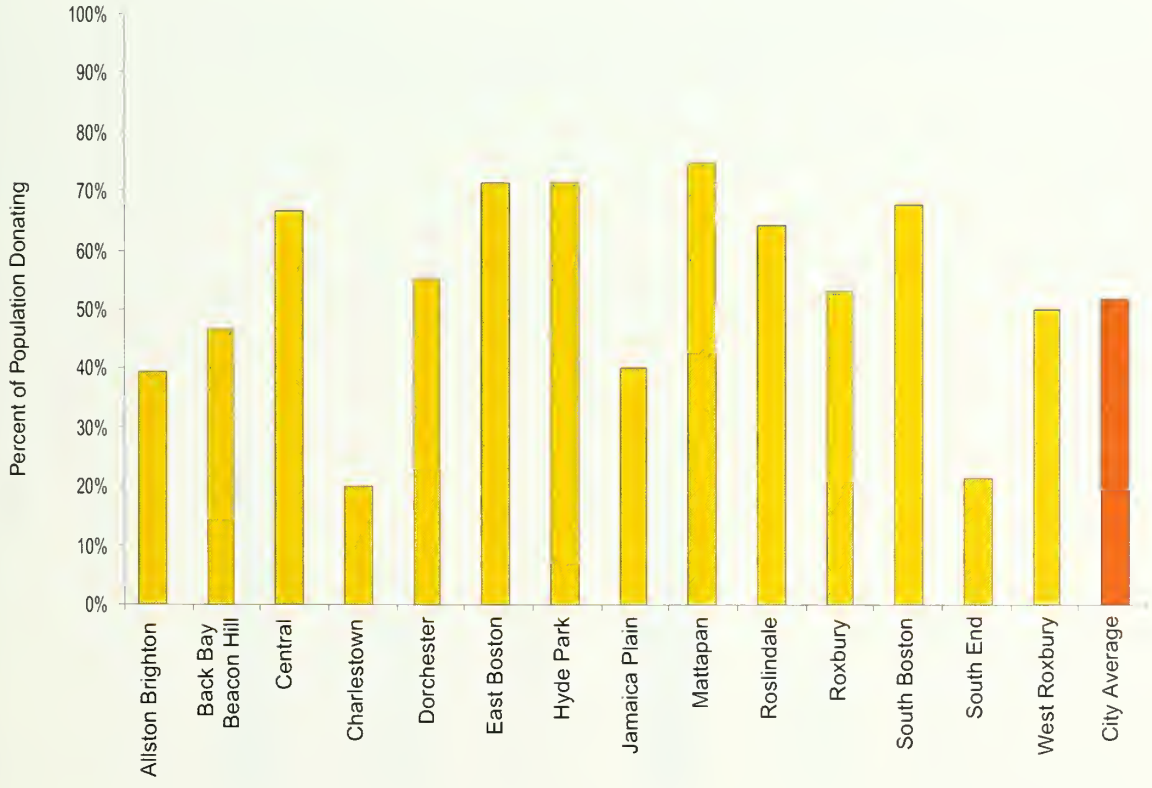
What does this mean?

Young people have an enormous amount of energy and passion which, if well directed, can translate into constructive civic engagement. If ignored, this same energy can lead to social problems caused by boredom and a lack of challenging activities (see Public Safety section). The 1999 Annual Youth Survey of 1,000 youth by the Boston's Office of Community Partnerships indicates that 47% of the youth surveyed identify making a contribution to society as a very important life goal and that 60% reported performing volunteer work or community service in the prior six months. In its April 2000 report titled *"Everybody's Out There for Youth"* Boston's Office of Community Partnerships talks about the importance of caring adults in the lives of young people as essential to any "asset building" approach. It reports that over 6,000 Boston youth are registered in formal mentoring programs. Additionally, the 1999 Annual Youth Survey also indicates that 96% of youth surveyed report having a caring adult in their lives who can inspire them to work hard and achieve their dreams, and 93% who have some adult they can confide in if they need help.

Charitable donations by neighborhood

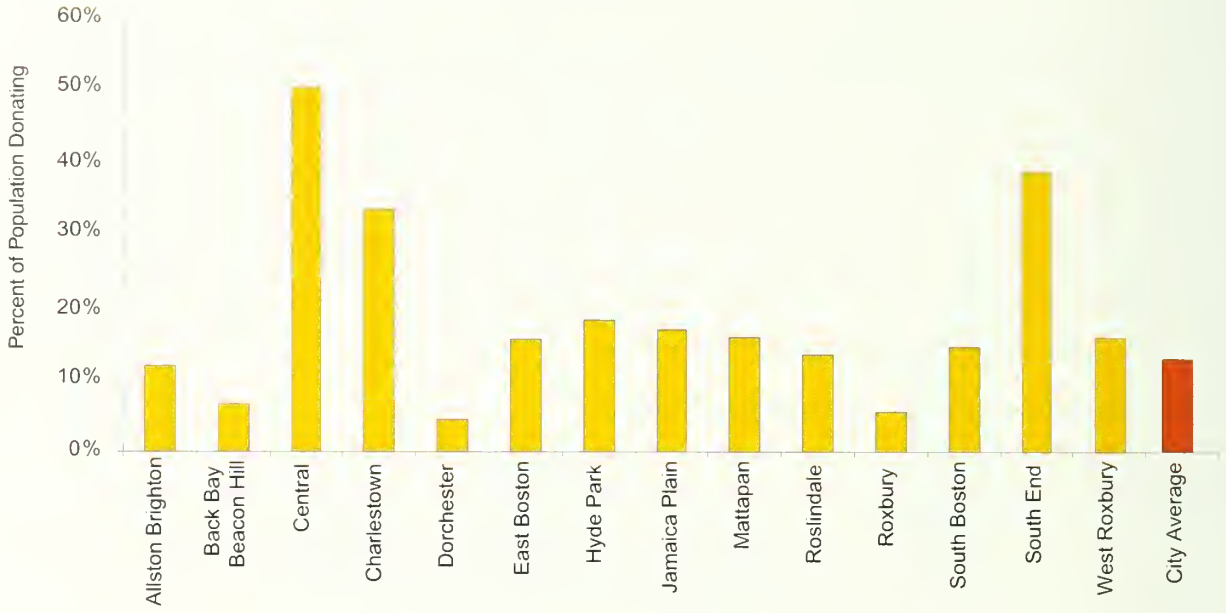
GIVING IN BOSTON WAS HIGHEST IN THE OTHER CHARITABLE DONATIONS CATEGORY. CENTRAL BOSTON RESIDENTS LED IN POLITICAL DONATIONS.

Religious donations by neighborhood, Boston Pilot Survey, 1998



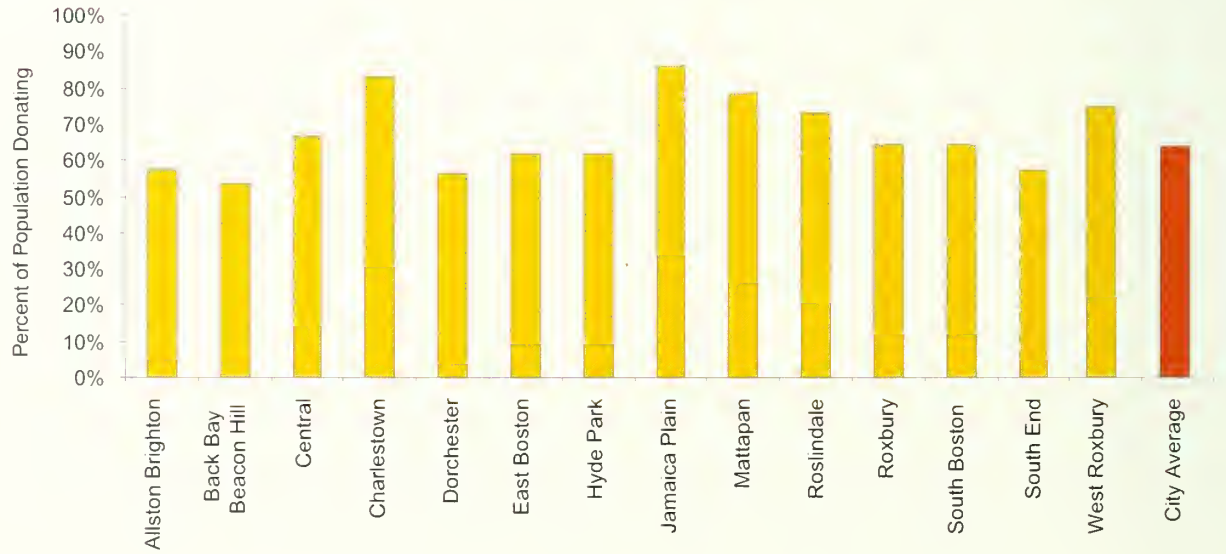
Source: UMass Boston, Center for Survey Research

Political donations by neighborhood
Boston Pilot Survey, 1998



Source: UMass Boston, Center for Survey Research

Other charitable donations by neighborhood
Boston Pilot Survey, 1998



Source: UMass Boston, Center for Survey Research

What does this mean?

A 1998 indicators study released by the President's Council on Sustainable Development suggests that the percentage of households contributing time and money to religious charities exceeded contributions to charities in other sectors by almost 100%. Charitable giving across the nation was led by religious charities, followed by health, human services, youth development, and education. A 1998

University of Massachusetts/Boston survey of 300 residents across Boston neighborhoods explored charitable donations in three major categories: religious donations; other charitable causes; and political donations. Donations also varied by income group. Responses indicate that people earning less than $30,000 gave to religious and other charitable causes almost equally, while people earning over $30,000 gave more heavily in the other charitable causes category. Boston residents preferring most to donate in the other charitable contributions category were most likely to be found in the neighborhoods of Jamaica Plain, Mattapan, Charlestown and West Roxbury. Second preference for donations was to religious institutions, highest in the neighborhoods of East Boston, Central Boston, Mattapan and South Boston. The third category, political donations, was preferred most by residents of Central Boston, Charlestown and the South End.

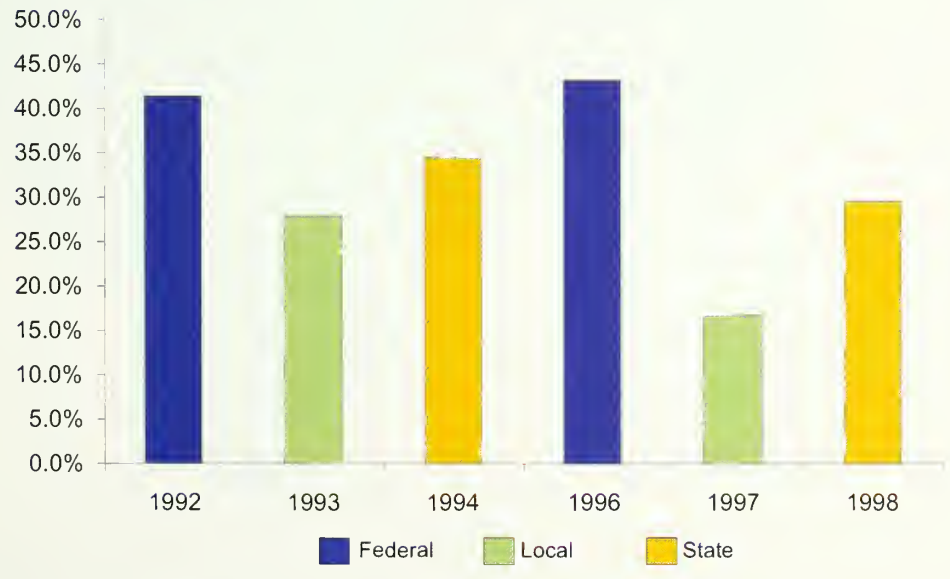
1.2 High Voter Participation

Voters are the driving force of democracy. As an indicator of civic health, voter participation rates tell us about democracy in action, about the degree to which people exercise individual choice to produce community leaders and to collectively influence policies, laws, and programs. Given the influx of newcomer immigrant populations in Boston, it is also important to consider additional indicators to account for civic action taken by people not yet eligible to vote, who find other ways to express their concern, interest, and personal investment in improving community life. As shown in the indicator on Civic Involvement, many of these community members are joining neighborhood or citywide organizations, committees, task forces, and other forums.

Total voting population 18+ years old versus number of registered voters and actual voter participation rates

OF THE ELIGIBLE VOTER POPULATION OF 464,829 (18+ YEARS), BOSTON HAS 237,870 REGISTERED VOTERS AND A VOTER PARTICIPATION RATE THAT VARIES BETWEEN 30% AND 50%.

Boston's voter participation rates for federal, state and local elections, 1992–1999



Source: Boston Election Department

What does this mean?

Boston has 237,870 registered voters out of a voting age population of 464,829. Its voter turnout rate for voting ranges between 30% and 50%, depending upon the type of elections and the fierceness of the race. There are many reasons besides why people do not vote: they may not like any of the candidates; may feel that the outcome will not produce desired changes; or believe that their vote will not really count. They may also be recent immigrants who, though of voting age, are not eligible to cast a vote.

Number of people who voted in the most recent mayoral and presidential elections, by neighborhood

BOSTONIANS VOTE MORE IN PRESIDENTIAL ELECTIONS (40%–50%), AND LESS IN LOCAL ELECTIONS (LESS THAN 30%). PARTICIPATION RATES VARY GREATLY ACROSS AND EVEN WITHIN NEIGHBORHOODS.

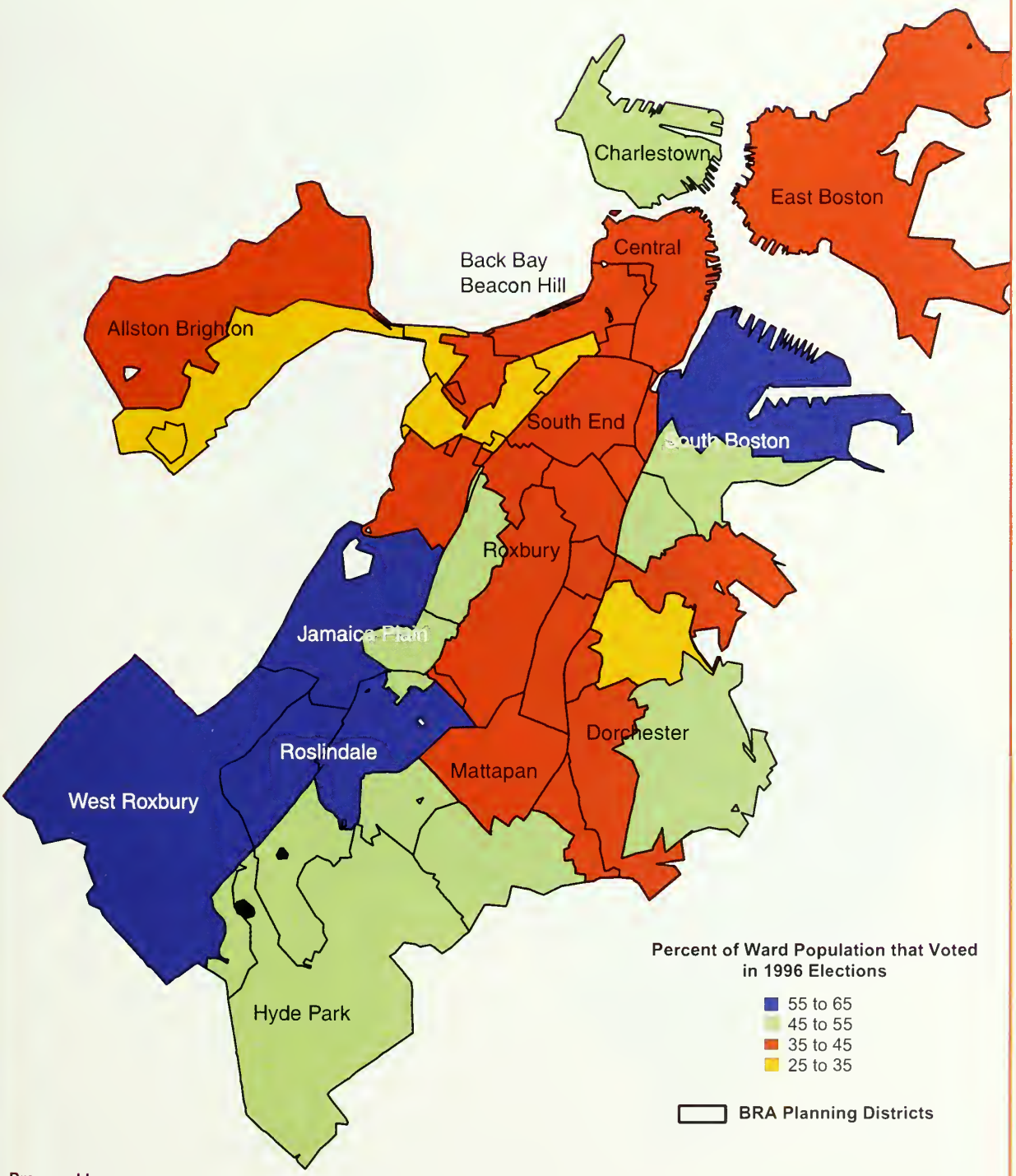
See voter participation rate maps that follow

What does this mean?

Boston has not seen a significant change in overall voter turnout over the last five election cycles. Bostonians, on average, are far more likely to vote in a presidential election than in a local or state election. Years with a presidential election have the highest voter turnout, and mayoral elections, held one year after presidential elections, tend to have the lowest turnout. Gubernatorial elections fall on even years between presidential elections and tend to have voter turnouts that are lower than presidential elections but higher than mayoral elections.

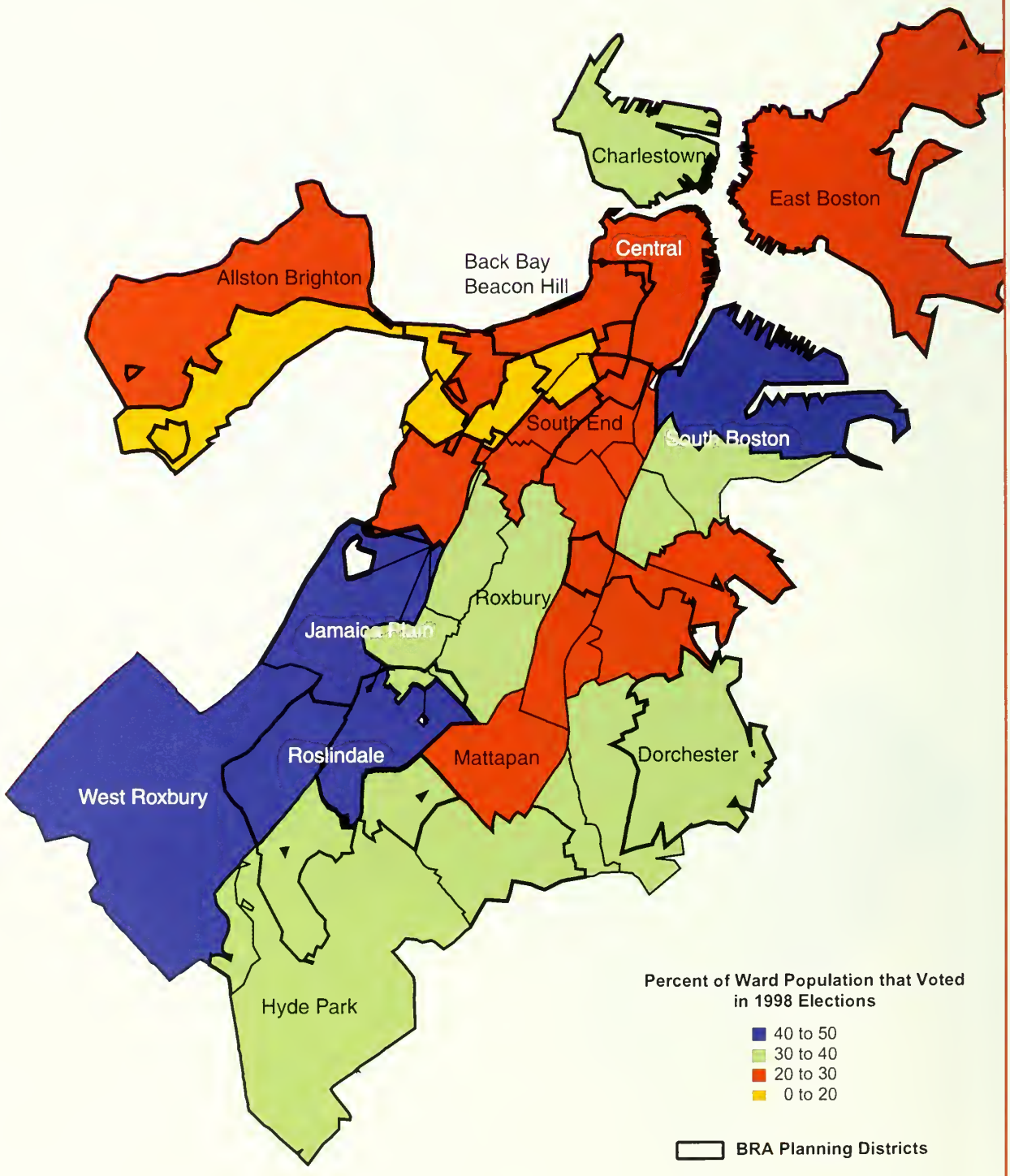
The maps on the following pages show the variation in voter turnout by ward for the 1996 presidential elections and 1998 state elections, indicating that even within one neighborhood, some wards are politically more active than others.

Percent of registered voters who voted in 1996 presidential election



Prepared by:
Alan Saiz, Dept. of Information Services
Northeastern University

Percent of registered voters who voted in 1998 state elections



Prepared by:
Alan Saiz, Dept. of Information Services
Northeastern University

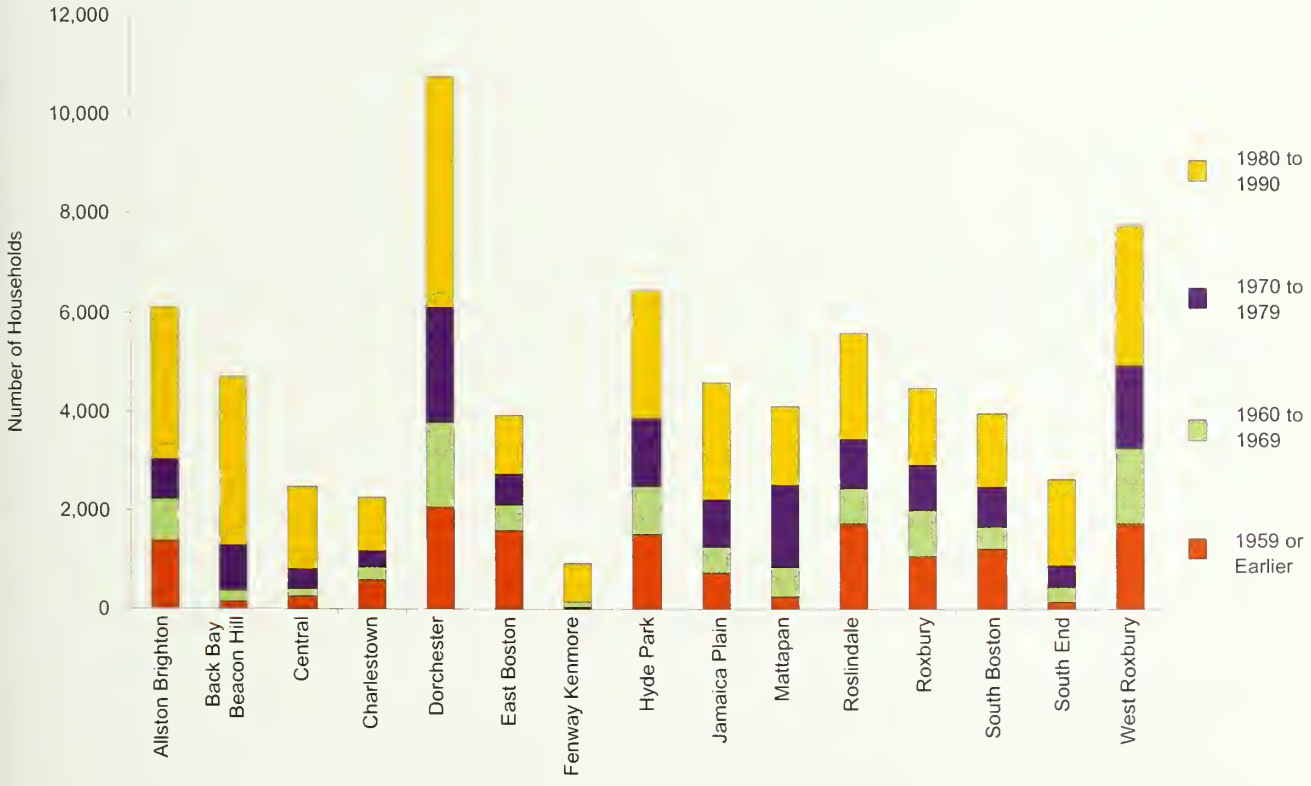
1.3 Stability and Investment Within Neighborhoods

Stable neighborhoods that are safe, well cared for, and have amenities that contribute to a high quality of life are likely to increase in both civic engagement and economic value over time. Rapid movement in and out of a neighborhood, on the other hand, affects the ability of people to get to know and trust their neighbors, and to build a sense of community. Also, rapid change is often an indicator of local economic conditions and the level of satisfaction with local services such as education and safety. Tracking stability in the context of demographic and income shifts in a neighborhood can tell us if that neighborhood is facing the threat of gentrification (with poorer people being displaced from their neighborhoods because of rising rents and home values as wealthier people move in) or about the threat of disinvestment.

Percent of people living at the same address by number of years, by neighborhood

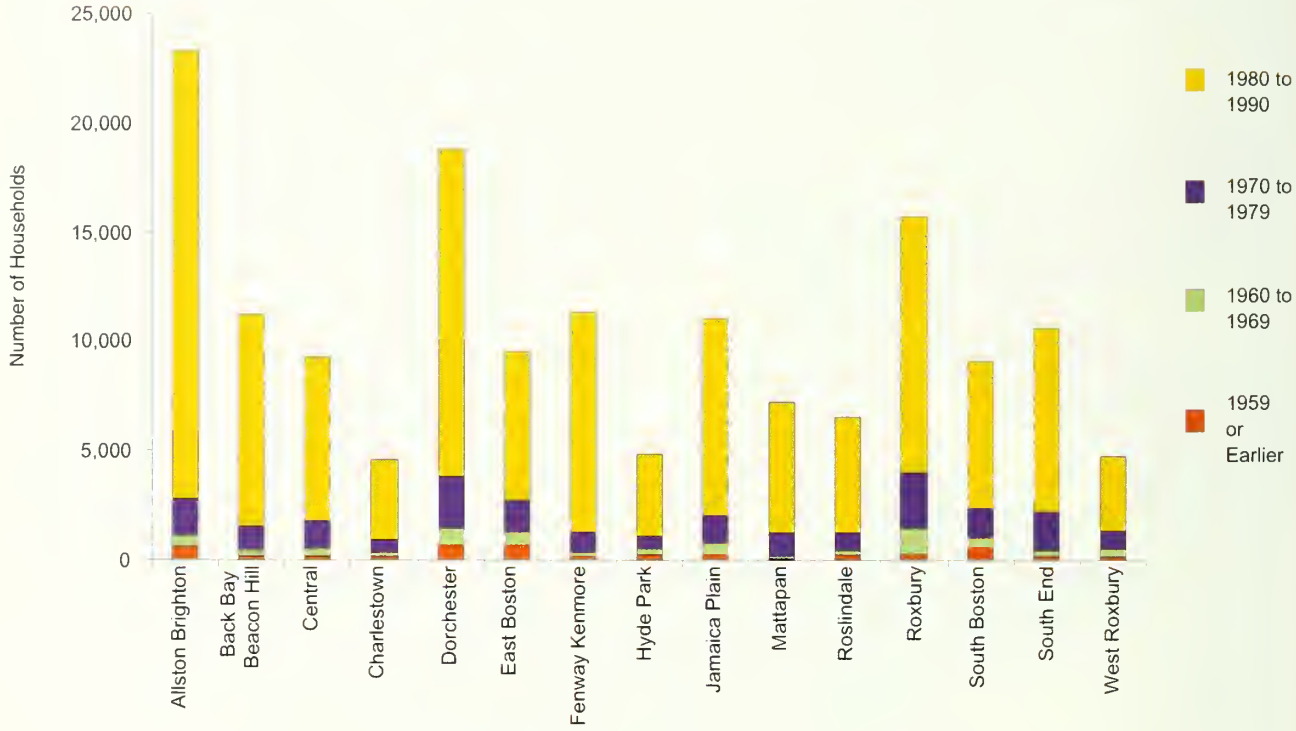
1990 CENSUS DATA INDICATE THAT MOST BOSTON NEIGHBORHOODS HAD MANY LONG-TERM RENTERS AND OWNERS. HOWEVER, CURRENT RISING HOME VALUES AND RENTS MAY BE CHANGING THIS.

Length of occupancy of homeowners by neighborhood, 1959 and earlier to 1990



Source: U.S. Census, 1990

Length of occupancy of renters by neighborhood, 1959 and earlier to 1990



Source: U.S. Census, 1990

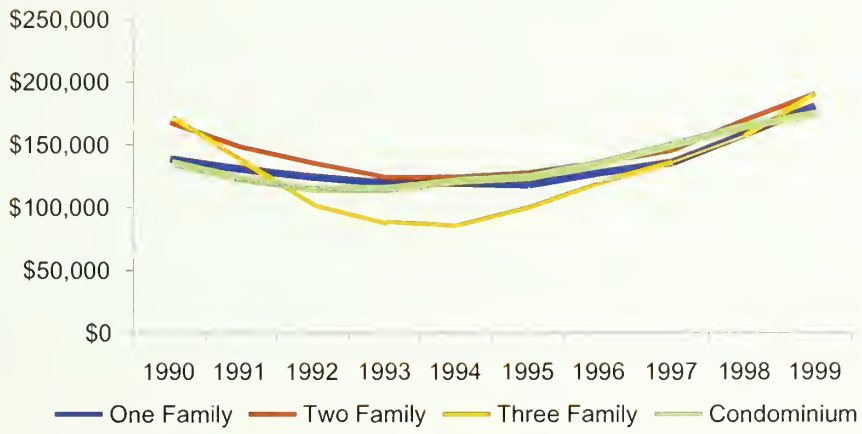
What does this mean?

People who live at the same address for more than five years are more likely than those in transition to invest in relationships, as well as in their homes and yards, the quality of which contributes to a neighborhood's stability. Census data from 1990 suggest that many Boston neighborhoods had a strong vested population of both renters and homeowners to provide stability to their neighborhoods. In 1990, neighborhoods with the largest number of long-term residents were Dorchester, Roslindale, Brighton, Hyde Park and Roxbury. Recent pressures in the housing market may be shifting this balance as increasing housing costs have the potential to drive out elderly residents and low-income families who can no longer afford to live there. As indicated by an increase in the volume of sales between 1998 and 1999 in neighborhoods such as Back Bay/Beacon Hill (66%), East Boston (43%), the South End (37.5%) and Roxbury (28%), there could be a dramatic change in long-term residential patterns. These changes need to be examined in view of income and demographic shifts in the community as they can affect the long-term stability and civic health of Boston's neighborhoods.

Changes in property values

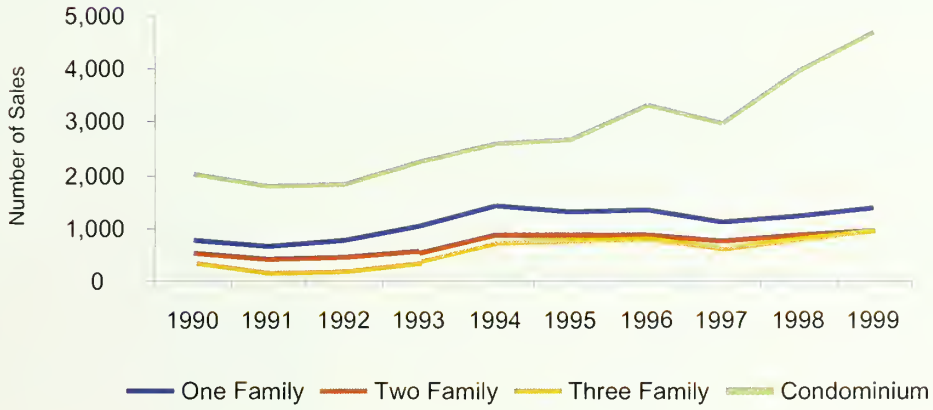
FROM 1998 TO 1999, HOME VALUES ROSE IN ALMOST ALL NEIGHBORHOODS IN BOSTON. CITYWIDE, VALUES ROSE 22.5% FOR THREE-FAMILY HOUSES, 15.6% FOR SINGLE-FAMILY HOMES, 12.3% FOR TWO-FAMILY HOMES, AND 6% FOR CONDOMINIUMS.

Change in home values, 1990-1999



Source: Department of Neighborhood Development, Research and Development Unit

Change in home sales volume, 1990-1999



Source: Department of Neighborhood Development, Research and Development Unit

What does this mean?

Between 1998 and 1999, property values rose in almost all neighborhoods in Boston, but saw a decrease in the Back Bay/Beacon Hill, Central Boston, and the Fenway/Kenmore neighborhoods. Property values for single-family units rose most in the South End, by 55%, followed by South Boston by 33.7%, and Charlestown by 25%. Some part of the increase in property values, however, is also attributable to the level of investment that government, local organizations, and local residents have made in their communities. Their engagement and advocacy has resulted in better amenities, cleaner parks and safer streets, making these communities more attractive places in which to live. Boston's robust economy and a tight housing market have also contributed to a dramatic increase in property values across every neighborhood. The rate of increase is causing grave concerns about gentrification as property owners sell in the hot housing market. Strategies aimed at stabilizing rents and providing incentives for homeowners to stay invested in their communities could go a long way towards ensuring neighborhood stability.

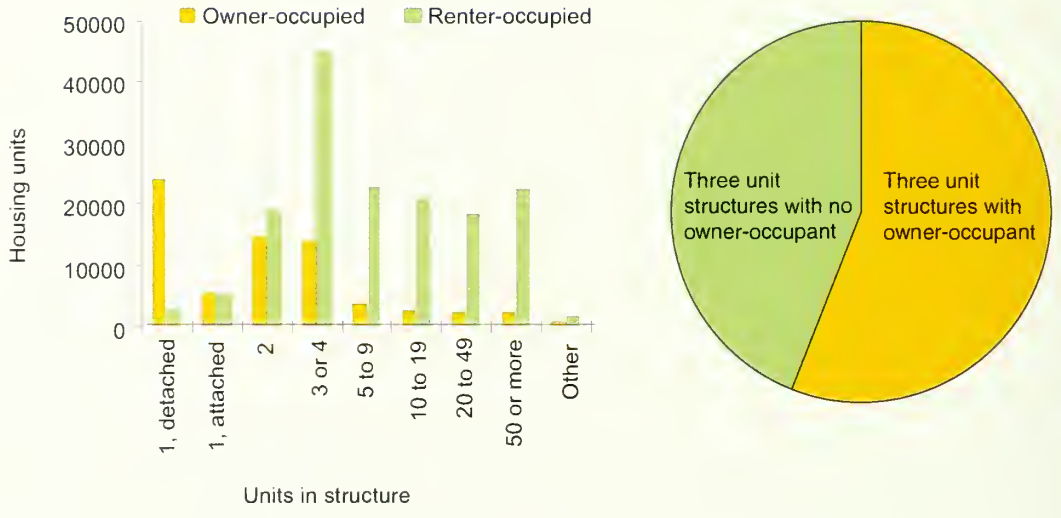
1.4 Local Ownership

Like longevity in a neighborhood, local ownership ensures that people are invested in their communities. Resident ownership often ensures accountability for the condition of one's property and for what goes on there. It acts as a self-policing mechanism for neighborhoods, as property owners watch out for issues ranging from crime to the maintenance and upkeep of the public realm in order to protect their investment. It can also lead to people being more engaged in local and community affairs, and to greater interaction among community members. Neglect, sometimes associated with absentee ownership, can affect a neighborhood's stability by creating conditions for increased crime, the perception of crime or both. Investment in upkeep on the other hand, strengthens social capital, builds community pride, and enhances our sense of well-being. However, homeowners occasionally are seen by renters as protecting their own interest at the expense of those who do not own property. A healthy community balances these interests.

Number of owner-occupied residential structures (1–6 family) by neighborhood

CENSUS DATA SHOWS THAT OVER 70% OF BOSTON'S 1–6 FAMILY STRUCTURES WERE OWNER OCCUPIED IN 1990. NEIGHBORHOOD DATA NOT AVAILABLE AT THIS TIME.

Owner occupied residential structures by building type, 1990



Source: U.S. Census, 1990

What does this mean?

Besides being the quintessential American Dream, home ownership is a strong indicator of the social and economic health of a community. In fact, neighborhood destabilization has often been attributed to poorly managed investor-owned properties or absentee-owned properties that are in disrepair. According to the "Broken-Window Syndrome," neglect and disrepair can have a negative domino effect on property values and on a neighborhoods overall stability and economic value.

Boston has a high degree of local ownership. A large percentage of Boston's housing stock is two- and three-family owner-occupied homes. As a result, though Boston's home ownership rate is at about

35%, over 70% of all structures are owner-occupied. Two- and three-family owner-occupied homes provide homeowners with supplemental income in the form of rents, ensure neighborhood stability and investment through local ownership, and provide a local presence. It is therefore a more appropriate measure of local ownership.

Percent of local businesses owned by minorities and women by neighborhood

MINORITY AND WOMEN BUSINESS OWNERSHIP IS LOW IN COMPARISON TO NEIGHBORHOOD DEMOGRAPHICS. IT IS HIGHEST(15–30%) IN NEIGHBORHOODS WITH OVER 90% MINORITY POPULATIONS AND LESS THAN 5% IN NEIGHBORHOODS THAT ARE OVER 70%WHITE.

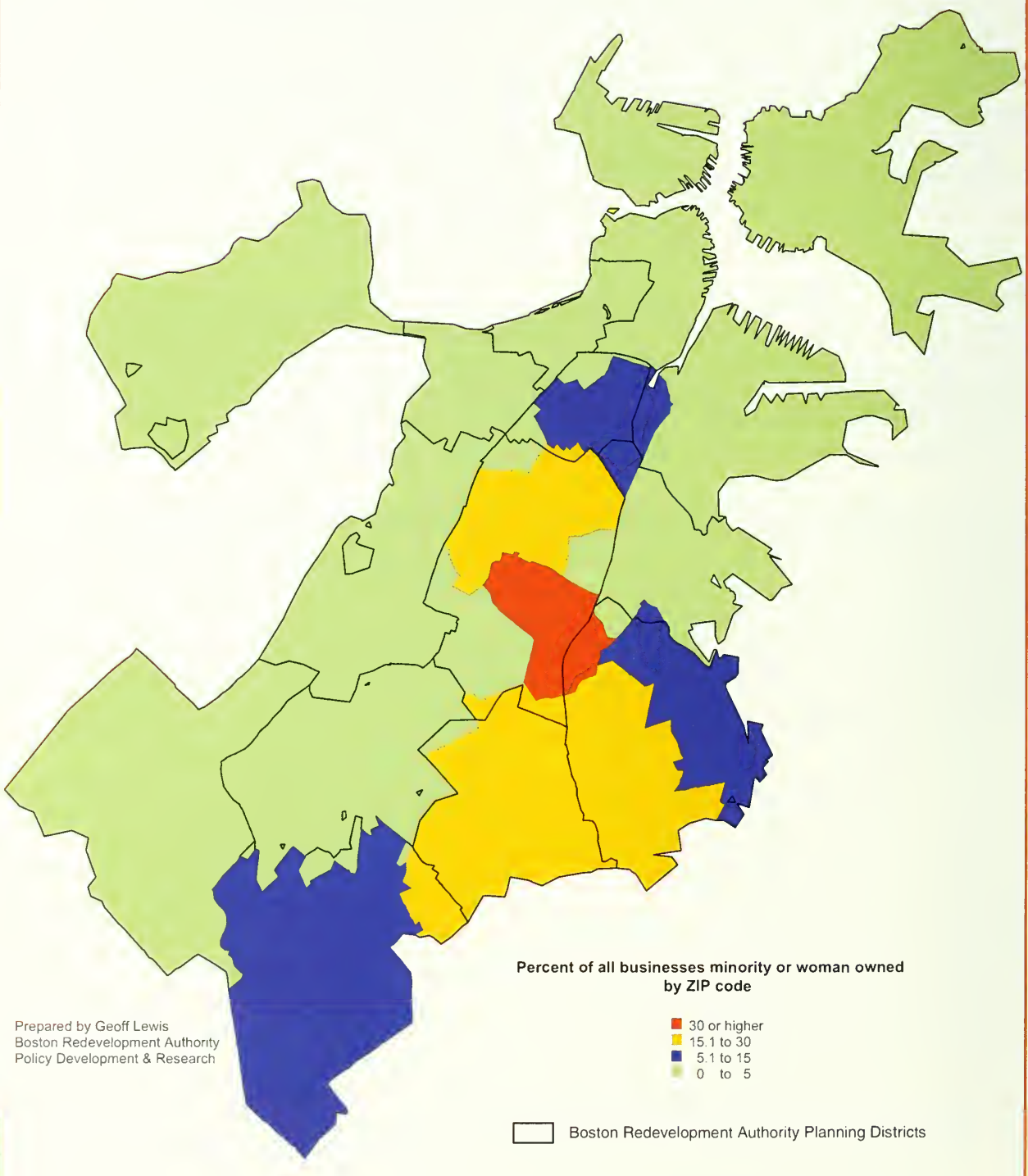
See map on following page

What does this mean?

Boston residents often refer to their neighborhood's commercial districts as the "living room" of their community. Locally-owned businesses are often viewed as community assets that contribute to the stability and quality of life of the neighborhood. They also indicate local investment — the recycling of economic assets throughout the community — and local ownership by racial minorities and women also indicates the ease with which historically disadvantaged groups can advance in a community.

However, an examination of minority- and women-owned businesses in Boston shows that while minority and women owned businesses somewhat reflect a neighborhood's racial/ethnic structure, the actual percentage of ownership generally falls far short of actual demographics. For instance, the predominantly minority neighborhoods of Roxbury and Mattapan, with about 90% residents of color, have the highest percentage of minority- and women-owned businesses at an average 15–30% with some pockets in Roxbury at 30–60%. The South End and Dorchester, which are racially more mixed, are at 5–15%. Boston neighborhoods that are over 70% white have less than 5% minority- and women-owned business enterprises.

Percent of businesses that are minority or woman owned


Percent of all businesses minority or woman owned by ZIP code
30 or higher
15.1 to 30
5.1 to 15
0 to 5
Boston Redevelopment Authority Planning Districts
Prepared by Geoff Lewis
Boston Redevelopment Authority
Policy Development & Research

Source: City of Boston, Minority & Women Business Enterprise Office
U.S. Census Bureau, Compiled by Boston Redevelopment Authority

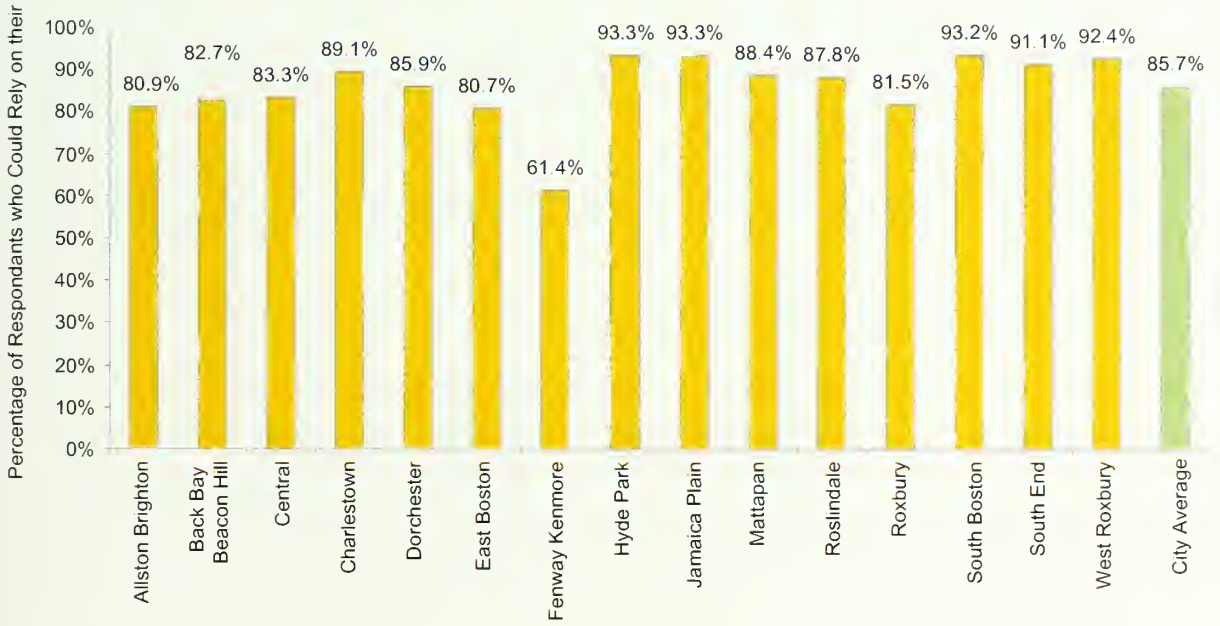
1.5 Civic Confidence

Social trust and confidence emanate from civic and social interactions and networks among community members, and affect civic health and the well-being of residents. They also affect empowerment and civic engagement. They strengthen the local institutions that create the ability for communities to solve problems and resolve conflicts amicably. Civic confidence usually reflects civic engagement. A high level of civic confidence indicates that people feel that they have a say in issues and are being effective.

Percent of Boston residents who trust their neighbors

IN 1999 OVER 85% OF BOSTON RESIDENTS SURVEYED SAID THEY TRUSTED THEIR NEIGHBORS.

Trust among neighbors in Boston, 1999



Source: Boston Police Department, Citizen Survey, 1999

What does this mean?

A 1999 survey of 3,046 Boston residents, conducted by the Boston Police Department, indicates that over 85% of the respondents citywide felt they could rely on their neighbors for help, which indicates a high level of trust among people. Levels of trust were high across all Boston neighborhoods. This can be compared to a 1998 study, "Trust and Citizen Engagement in Metropolitan Philadelphia: A Case Study," conducted by the Pew Research Center for People and the Press, that compared a national survey with that of Philadelphia and found that 42% of Philadelphia residents felt they could trust their neighbors. The national average was 45%.

1.6 Healthy Race Relations

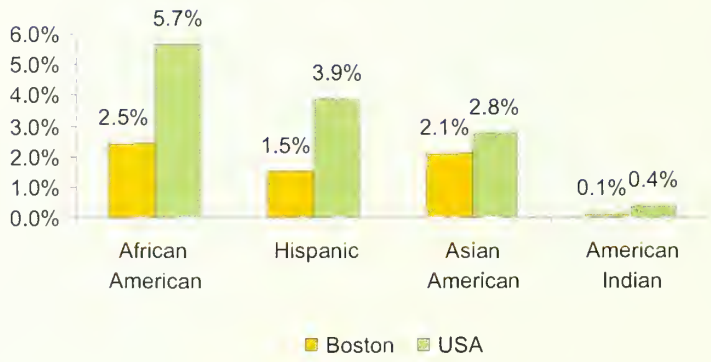
Healthy race relations are the foundation of a community's civic health. Boston's growing racial and ethnic diversity requires a strong base of knowledge about different cultures, inclusion and representation of the city's ethnic and racial diversity, and an understanding of the value of cultural diversity. The reflection of cultural and ethnic diversity in leadership and decision-making positions in Boston's major public and private institutions is a key measure of the acceptance and integration of different groups in mainstream civic life, the depth and breadth of corporate decision-making capacity, and the ease with which racial/ethnic groups can organize and express themselves and to influence the civic landscape of the city.

Boston has seen severe racial tensions in the past. Healthy race relations will require awareness of the changing demographic landscape, equitable representation of all races in leadership positions, vigilance on incidents of reported hate crimes, and a sharp reduction of disparities in economic, health, and educational outcomes across racial lines.

Percent officials and managers of color in private sector

IN1998, AMONG HIGH-LEVEL MANAGERS AND EXECUTIVES IN METRO-BOSTON'S PRIVATE SECTOR, 94% WERE WHITE AND ONLY 6% PEOPLE OF COLOR. BOSTON LAGS BEHIND NATIONAL TRENDS.

Percent of high-level executives and managers of color, 1998



Source: Equal Employment Opportunity Commission private industry figures, 1998. As reported in State of African American Professionals in Boston, The Partnership, Inc., 2000.

What does this mean?

Professional networks are often the cause of career advancement or delay. Likewise, word about the professional climate of a place travels quickly, affecting firms' ability to attract and retain professionals of color. The year 2000 report *"State of African American Professionals in Boston,"* by the Partnership, Inc., an organization working with firms and organizations in Greater Boston to more effectively attract, retain, and develop leadership among professionals of color, examines the workforce diversity of private industry at the professional and officials/management levels. It reports that, while Boston's workforce is less diverse than the national average, it is increasing. While African Americans and Latinos are under-represented, Asian Americans in Boston are ahead of the nation in terms of the percentage of professionals and managers holding these higher paying positions.

Among all 1,164,771 people employed in private industry in Metro-Boston: 83% were white; 6.5% were African American; 6.3% were Hispanic; 3.9% were Asian American; and, 0.3% were American Indian. Of people employed as professionals in Metro-Boston, however, 89.1% were white; 3.4% were African American; 1.7% were Hispanic; 5.6% were Asian American; and, less than 0.2% were American Indians. Of officials and managers with responsibility for setting policy directions, the percentages are still lower, African Americans at 2.5%; Hispanics at 1.5%; Asian Americans at 2.1%; and, American Indians at 0.1%.

Number of reported hate crimes by neighborhood

See Public Safety section.

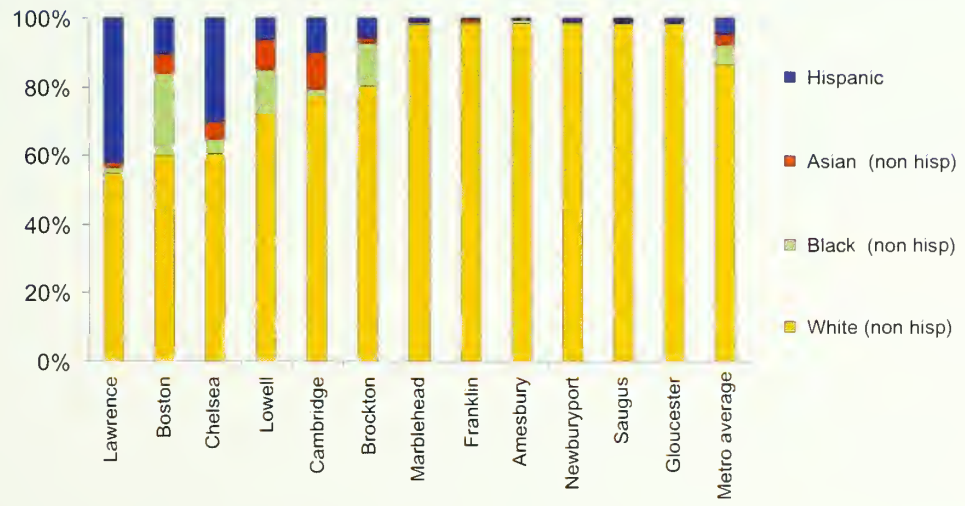
What does this mean?

Reported hate crimes citywide have remained constant despite the fact that Boston has seen an increase in its overall population, as well as in its immigrant population. Though the overall decrease in hate crimes is encouraging, hate crimes continue to be of concern to the Boston Police Department as they indicate racial intolerance, which can have serious implications in Boston's growing multicultural community.

Degree of racial integration in Metro-Boston and by Boston neighborhood

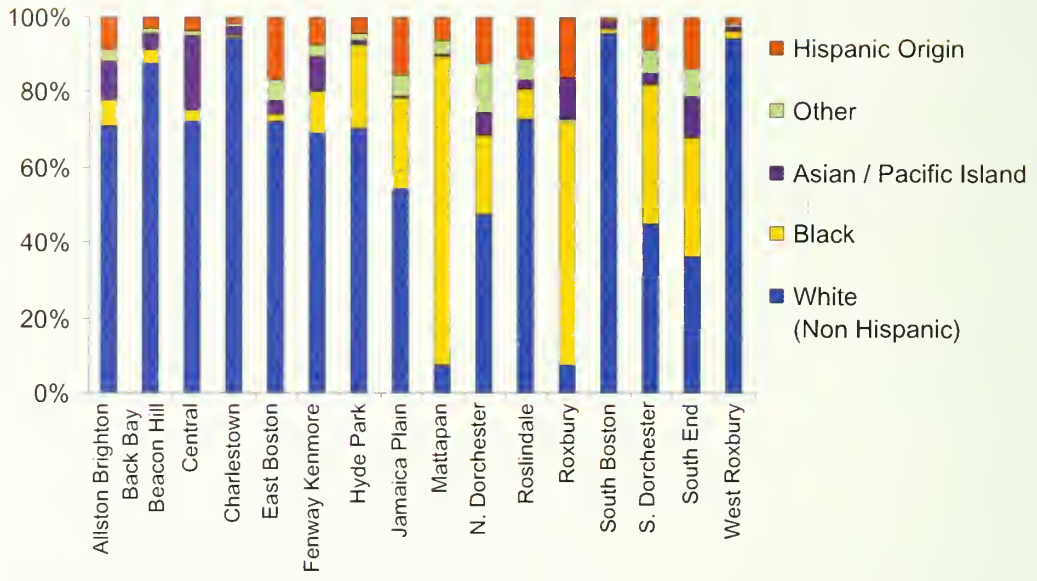
IN METRO-BOSTON RACIAL MINORITIES ARE CONCENTRATED IN A DOZEN COMMUNITIES. WHILE BOSTON OVERALL HAS A BALANCED MIX OF RACIAL AND ETHNIC GROUPS, WITH SOME EXCEPTIONS, BOSTON NEIGHBORHOODS HAVE A HIGH DEGREE OF RACIAL SEGREGATION.

Racial mix of selected communities in Metro-Boston, 1990



Source: Metropolitan Area Planning Council

Racial mix in Boston neighborhoods, 1990



Source: Boston Redevelopment Authority

What does this mean?

Due to historic inequities, racial and ethnic minority groups are often concentrated in low - and moderate-income areas. The issue of economic class therefore often merges with issues of race. However, it is also important to understand racial segregation in terms of the cultural needs of communities who may choose to congregate in close geographic proximity in order to access cultural and social institutions that are shared by people of a particular ethnic community. The key variable is choice.

Boston's neighborhoods range from being very racially integrated like the South End and Jamaica Plain, that reflect the ethnic mix of Boston, to highly segregated neighborhoods like Charlestown and West Roxbury which are primarily white or Mattapan which is primarily black.

1.7 A Welcoming, Inclusive Environment

A sustainable community provides an inclusive environment for people of all races, languages, ages, and abilities. A 1999 survey of community leaders representing twelve major cultural and linguistic communities conducted by the Mayor's Office of New Bostonians was aimed at assessing qualities that make Boston a welcoming city. Survey results underscored Boston's diversity, its existing community networks and organizations, the availability of higher education and schools, the availability of quality health care, and political freedom as the most important attributes that attract newcomer groups. The group of about 150 survey participants also identified and prioritized the most pressing challenges to their communities: discrimination and cultural insensitivity; lack of affordable housing; lack of English as a Second Language (ESL) classes; and legal issues regarding immigrant status.

Percent of public buildings that are accessible to people with disabilities

DATA NOT AVAILABLE AT THIS TIME

What does this mean?

For people to participate actively in the civic and cultural life of a city, it is essential to have access to public and cultural institutions. The federal Americans with Disabilities Act is aimed at ensuring the elderly, parents with baby carriages, and persons with disabilities physical access to public institutions and venues. Great progress has been made in making cultural venues, streetscapes and sidewalks, housing, and commercial areas more welcoming and accessible. However, in Boston, where a large percentage of building stock is older, multiple strategies for ensuring accessibility are important, and much more remains to be done.

Multi-lingual capacity in major public institutions and places in Boston

SAMPLE SURVEY INDICATES GROWING MULTI-LINGUAL AWARENESS.

COMPREHENSIVE DATA NOT AVAILABLE AT THIS TIME.

What does this mean?

The Mayor's Office of New Bostonians' notes that more than 140 languages (including many dialects) are spoken in Boston. The cultural diversity this represents, adds tremendous richness to the civic landscape of Boston while also presenting challenges in terms of integrating newcomers into its civic life. Opportunities to publicly express and celebrate cultural traditions and values and to fully engage in civic life will reshape the city. Likewise, Boston is a tourist destination for increasing numbers of people from around the globe. They, too benefit from Boston's increased multi-lingual capacity.

The impact of Boston's changing demographic landscape can be seen in signage, literature, forms, and notices used at different institutions that are used to carry out everyday business. The major public institutions and places across the city continue to exhibit most signs only in English. However, a range of institutions surveyed exhibited an awareness of the need to reach out to a diverse population. Medical institutions, Logan Airport, and local banks are beginning to offer interpreter services in a wide array of languages that reflect the broadening diversity of Boston's population. A sample survey of interpreter services at select institutions shows a growing awareness of language issues in meeting customer/client needs. The following institutions provide interpreter services: Children's Hospital(35 languages); Logan International Airport (26 languages); Boston Medical Center (17 languages); and, Citizen's Bank (39 languages spoken by staff).

SECTION TWO

Cultural Life and the Arts

Vision

A regional and world center of cultural excellence that provides its residents with a full range of choices for the expression of creativity, imagination, cultural heritage and faith.

Indicators of a Rich and Vibrant Arts and Cultural Climate	Measures	How Is Boston Doing?
2.1 **Vibrant Expressions of Cultural Diversity**	■ Cultural expression and representation in Boston	■ Boston is home to people from over 100 world cultures
	■ Cultural/ethnic diversity among the leadership of key sectors in Boston	■ Data not available at this time
2.2 **Active Participation in Art Making**	■ Distribution of facilities for teaching, learning, rehearsal, and making of visual/musical/performing arts	■ Formal facilities concentrated in central Boston. Many opportunities are available in Boston's neighborhoods
	■ Diversity of artists in Boston	■ Over 18,000 artists registered with Boston's Office of Cultural Affairs represent a broad range of disciplines
	■ Student exposure and number of teachers dedicated to visual arts, music, and theater in Boston's public schools	■ Boston's public schools have 250 teachers dedicated to age-appropriate and sequential instruction in the arts
2.3 **Opportunities for Arts Appreciation**	■ Total attendance and free entries /reduced rate hours at major arts and cultural institutions	■ High attendance at special performances and exhibits. Data on free/ reduced rate entries not available.
2.4 **Expressions of Spirituality**	■ Number of religious institutions per 1,000 residents	■ Dorchester, Roxbury have the highest number of religious institutions
	■ Percentage of Bostonians who feel spirituality and faith are an important part of their lives	■ 55% of youth surveyed consider religion as important to their lives; 53% consider themselves spiritual
2.5 **Protected Historical Sites and Architectural Heritage**	■ Number of historically and architecturally significant sites and historic districts by neighborhood	■ Boston has 76 landmark sites, 7 historic districts, 10,338 sites on National Register of Historic Landmarks
2.6 **Access to a Broad Range of Leisure Activities**	■ Number of hours worked per week vs.hours spent in leisure activity	■ Survey data not available at this time
	■ Street performer/vendor permits issued by neighborhood	■ Data not available at this time
	■ Clubs, cafes, pubs, book and music stores/1,000 persons by neighborhood	■ Data not available at this time
2.7 **Opportunities for Athletic Participation**	■ Total vs. local attendance for events at Boston's sports institutions	■ In 1999, 5.5 million attended Fleet Center and Fenway Park events
	■ Number of sports leagues, clubs, and teams by neighborhood	■ Data not available at this time
2.8 **High Economic Impact of Arts and Cultural Sectors**	■ Creative industries sector share of the regional, state, and local economy	■ Creative industries comprise 3.5% of Mass. economy, with $2.56 billion from the non-profit sector alone
	■ Number of jobs and wages generated by organizations and businesses	■ 111,270 New England jobs in non-profit cultural sector
2.9 **Strong Financial Support and Participation**	■ Distribution of financial support by neighborhood	■ Financial support has declined. Resources are concentrated in downtown areas

Boston's Culture

Historical context

Boston's history is the foundation of its culture. From celebrations of food and religion to the visual and performing arts, Boston's culture is made up of the contributions of its people over time.

Some of the ancestors of today's Bostonians arrived through immigration, some arrived as enslaved Africans, and some — Native Americans — have been here for thousands of years. Bostonians have interwoven their cultures of origin with local traditions, constantly reshaping and reinvigorating the city, and in the process influencing all facets of life, from architecture and public spaces to daily activities.

The Puritan and maritime cultures of British-inspired Boston in the 17th and 18th centuries gradually gave way to new influences. In the 19th century, black and white abolitionists, rural and urban Transcendentalists, suffragists, poets, painters and writers put their stamp on the city and marked it as a place of passionate and inspired innovation and debate.

Irish newcomers brought songs, stories and their Gaelic heritage to Boston. Waves of rural New Englanders leaving farms to work in new factories, African Americans fleeing slavery and Chinese immigrants responding to the opening frontier added their voices and heritage to Boston's culture. The arrival of new Bostonians from Italy, Germany and Eastern Europe further enlivened the city's culture. Civic leaders established great institutions such as the Boston Public Library, the New England Conservatory, the Museum of Fine Arts, Boston Symphony Hall, and the Metro-Boston park system.

More newcomers to Boston arrived throughout the 20th century. These new Bostonians came from Lebanon, the Ukraine, the Caribbean, the rural American South, Puerto Rico, Central America, South America, Ireland, Russia, Southeast Asia and Africa. Students from the area's universities and colleges — many from overseas — stayed in Boston to make their mark as the city grew rich in its mix of languages and traditions.

As a result of this complex weave of histories and traditions, Boston is one of the most ethnically and culturally diverse cities in the nation, with more than 140 languages spoken in its homes.

Boston's cultural life also includes the opera, ballet, modern dance, a great symphony orchestra, large and small theaters, choirs, museums, and schools of fine arts. The city's cultural wealth is reflected in beautifully designed parks and landscapes, historic architecture and districts and acclaimed urban design, its ethnic and religious festivals, and professional sports teams. With all of these influences, Boston today is a world-class city constantly being remade in response to its past, present, and future.

Regional context

A recent study by the New England Council explored the impact of both nonprofit and commercial creative endeavors on the region's economy. They found that New England's "creative cluster" is a cornerstone of the region's success, supporting an annual payroll of $4. 3 billion and almost 250,000 jobs.

This "creative cluster" affirms the traditions of those who live here, drives innovation in the technical and creative fields and attracts artists, workers and tourists to the region. It includes jobs in the applied arts, the visual and performing arts, the literary arts, the media, crafts, heritage, advocacy and support — with nonprofit, commercial and self-employed participants in all fields. The New England Council's study points out that with more than 3.5% of all jobs in the region, "employment in the creative cluster exceeds that of the software and communications services, healthcare, technologies and innovation services clusters and supports as many jobs as New England's computer equipment industry."

The creative cluster economy is growing fast in New England, with 14% growth between 1993

and 1997. This has resulted in much of the creativity, flexibility and resourcefulness needed to drive growth and innovation in the high-tech clusters.

Massachusetts has more people (116,300) employed in the creative cluster than any other New England state. It is home to 2,693 arts, humanities and interpretive science organizations, 336 local cultural councils and thousands of self-employed artists, humanists, architects, designers, craftspeople and musicians. These abundant cultural resources are essential to the state's quality of life and represent a major reason why businesses and workers seek to locate here. In fact, a 1998 U.S. Government report showed that the Commonwealth draws larger per capita audiences for ballet, museums, the theater and classical music than any other state.

The quality of our cultural life also plays a significant role in attracting 28 million tourists to the state each year, making tourism Massachusetts' third largest industry.

Massachusetts has also recognized the value of arts education by including it in the curriculum frameworks recommended in the Education Reform Act of 1993. According to recent studies, children who participate in programs that challenge their imagination and creativity perform better in school and on academic tests than those who do not -- regardless of income.

Citywide context

Bostonians tend to view culture as both heritage and the expression of creativity, imagination and inquiry. The city's cultural resources include expressions of ethnicity, heritage and faith as well as work in the visual arts, music, dance, theater, media, technology, literature, film, history, the interpretive sciences, sports and recreation. In the prism of Boston's culture, these means of expression sometimes overlap. With 18,000 resident artists and 250 nonprofit cultural organizations, Boston's cultural community is committed to building audiences and serving the community of people who live here as well as to attracting visitors and tourists

In the spring of 2000, the City of Boston's Office of Cultural Affairs released the "Cultural Assessment and Planning Report," which sets out to create a "fresh path" to artistic and cultural development in the city. Bostonians are already able to embark on this path with a new Performing Arts High School, a planned new Institute of Contemporary Art on the waterfront, the Boston Foundation's newly endowed Fund for Arts and Culture and the first annual Multicultural Festival on City Hall Plaza.

The visual and performing arts

Institutions such as the Institute for Contemporary Art, the Isabella Stewart Gardner Museum, the Boston Center for the Arts, the Boston Ballet, the Huntington Theater Company, the Strand Theater, the National Center of Afro-American Artists, the Asian American Cultural Center, Dance Umbrella and neighborhood-based arts and performance centers draw audiences and participants throughout the region. In 1998, almost 885,000 people attended events at the Wang Center for the Performing Arts. The Museum of Fine Arts and Boston's Symphony Hall each draw more than 1.5 million paying customers annually.

Boston also contains universities and schools of art and music such as the Berklee College of Music, the New England Conservatory, the Boston Conservatory, the Massachusetts College of Art, the School of the Museum of Fine Arts and the New England School of Photography. Most have exhibit and performance spaces of their own. Commercial galleries downtown and nonprofit institutions also provide exhibit space.

Boston has long been a generative center for music, with its 17th tradition of hymn composition now superceded by 21st century alternative bands. The Boston Symphony Orchestra, the Boston Pops, Wally's Jazz Club, concerts at the Strand Theater, and local bands and musicians contribute to Boston's reputation as one of the nation's centers of music innovation, education and performance. Salsa, swing and new Brazilian rhythms are coming into their own throughout the city, and Odaiko New England

brings the booming rhythms of traditional Japanese taiko drumming to Boston.

Boston is also becoming a center of film making. Between 1996 and 1998, the number of major movies shot in Boston increased by more than 250%. In 1998, the film industry had a $25 million economic impact on the city's economy. Recent labor issues, however, have reversed this trend by making films more costly to make in Massachusetts than in other places. However, Boston has begun to host an increasing number of film festivals.

In 1995, the Boston Public Schools began to implement the state's proposed standards for system-wide arts education, adding more than 70 new arts instructors. The Boston Cultural Council now awards grants through its PASS program to schools and neighborhood organizations to take school children to performing arts events in the city, and groups such as Arts in Progress provide arts education programs in the Boston Public Schools. The city's first public high school for the visual and performing arts, the Boston Arts Academy, a collaboration between the Boston Public Schools and the Pro Arts Consortium, opened in September 1998.

Heritage and the humanities

Symbols of American history are apparent throughout the city. Bostonians and visitors can be seen navigating the Freedom and Black Heritage Trails, enjoying the John F. Kennedy Library and Museum, gazing at the sculpted faces of the Civil War's 54th regiment (the first all-black regiment), or cruising the city on an amphibious "duck boat" tour. They can join a street fair in the North End, a celebration of Puerto Rican culture, Chinese New Year or the Dorchester Day and Saint Patrick's Day parades.

Famous historic sites such as the Bunker Hill Monument, the Old State House and the African Meeting House, as well as statues honoring the history of Boston's diverse peoples, attract many daily visitors. Place names such as Shawmut Avenue, Washington Street and Frederick Douglass Square commemorate Boston's social and political history. Increasingly, the city's place names reflect its more recent history: the Mary Ellen McCormack Housing Development; Martin Luther King, Jr., Boulevard; the John F. Kennedy Library; the Thomas P. O'Neill, Jr., Federal Building; Peter Medoff Way; the Leonard Zakim Memorial Bridge.

Boston's heritage is set in the very stones and bricks of our historic architecture — among the oldest and most beautiful of any in the nation. The Boston Landmarks Commission and the seven historic district commissions in Boston provide design reviews, architectural surveys, landmark designations, national register nominations and planning to protect the city's built heritage. Over 7,000 properties have been designated as Boston landmarks, either individually or within historic districts. More than 10,000 Boston properties are listed on the National Register of Historic Places.

A new nonprofit organization, the Boston History Collaborative, is creating new tours of Boston and its neighborhoods focusing on such areas as the city's literary, immigrant, maritime, and technological heritage.

Boston is also a major publishing center, with many resident writers and readers. The Boston Public Library (BPL), founded in 1848, was the first public library in the United States. Today, with 25 neighborhood branches, the BPL has the largest per capita branch system in the nation. In 1997, more than 2.2 million items were checked out by BPL card holders.

Finally, Boston is a center for civic dialogue, with lecture series sponsored by the Ford Hall Forum, the BPL, the Boston Citizens Seminar, the John F. Kennedy Library, the Asian American Resource Workshop, the Gaston Institute for Latino Community Development and Public Policy, and many others. These as well as local radio and television shows encourage public debate, marking Boston as a city actively engaged in both analyzing and creating its history and culture.

Interpretive sciences

Boston's museums have set a world-class standard for their exhibits, outreach, and inclusion. Visitors to the New England Aquarium and the

Arnold Arboretum learn about science in innovative, experiential ways. The Boston Children's Museum creates special exhibits that help to bridge chasms of cultural stereotypes and misunderstanding. Computer Clubhouses in Boston's neighborhoods attract youngsters eager to develop their cyberspace and digital graphics skills. The Science Museum has established a high standard for inclusive design, making it possible for all visitors to experience a dynamic learning environment regardless of disability or age. With color-coded pathways, tactile exhibits and choices in how to receive information — by sound, sight, or touch — the museum has created a model of accessibility that may influence other cultural institutions to be more inclusive as well.

Sports and recreation

Boston's sports fans are devoted, proud and protective of their teams: the Boston Red Sox; the New England revolution; the Boston Bruins; the Boston Celtics; and, the New England Patriots. New facilities, still in the planning stages, are attracting both enthusiastic support and passionate skepticism.

The Boston Parks and Recreation Department oversees 2,200 acres, extensive sports programs, community events and interpretive programs as well as recreational walks, talks, and bike rides. The Parks Department also offers art programs for girls and boys who may not be engaged in team sports.

Thousands of Boston residents, young and old, participate in organized sports teams and leagues: baseball; softball; soccer; hockey; basketball; bowling; cricket; track; and, gymnastics. Organized sports groups such as the All Dorchester Sports League, the North Dorchester Lacrosse League, the Middlesex Sports & Cultural Club in Mattapan, Brighton's Central Little League, the Park Way Youth Soccer League in West Roxbury, the Roberto Clemente Youth Baseball League in Roxbury, Hyde Park's Pop Warner Football League, and the East Boston Soccer League, among many others, enjoy the City's numerous public facilities throughout the year.

Over the last ten years, the Parks and Recreation Department has overseen a $120 million rehabilitation of Boston's park system, resulting in the renewal and upgrading of many of the City's facilities and playing fields. Boston also owns excellent golf courses in Hyde Park and Roxbury/Dorchester. Other resources, such as the Sportsman's Tennis Club, the Y's and the Boys and Girls Clubs, all nonprofit organizations, provide lessons and encouragement to eager youngsters. Associated Grant Makers (AGM) administers a fund to which most local foundations contribute that sends more than 20,000 Greater Boston youngsters to summer camp — with 9,000 of them from Boston.

Food culture

From clam chowder to spaghetti marinara to pad thai, Bostonians are passionate about food. Food is a part of our culture, not only in restaurants but in the foods we cook for our families and ourselves. The food we eat is an expression of our preferences and our history.

In the past few decades, Boston's growing ethnic diversity has transformed its food culture. This is reflected in the city's community gardens, ethnic restaurants and food stores, as well as in the new "world food" aisles of the Faneuil Hall Marketplace, grocery stores, and the menus of traditional restaurants. The vocabulary of most Bostonians has rapidly expanded to include dim sum, panini, tandoori, hommus, borcht, rasher, rotis, empanadas, sushi, and pho.

Leisure time

Leisure time provides the basis for family gatherings, friendships, mental rest and physical exercise as well as for volunteer activities — all necessary for the development of healthy communities. Bostonians can play golf or visit the zoo in Franklin Park, swim in Boston Harbor at the South Boston beaches or hike the Emerald Necklace or Great Blue Hill. With a little money, we can ride on a swan boat ride in the Boston Public Garden, row across Jamaica Pond, learn to sail on the Charles River or take a Boston Harbor cruise. We can listen to a free concert at City Hall or to musicians in our own neighborhood. In the winter, Bostonians skate on the Frog

Pond, sled in the Arnold Arboretum, dance at one of Boston's 70 clubs, or curl up with a book.

Neighborhood context

Celebrations of holidays and religious rituals that were formerly home- and neighborhood-based are broadening into public expressions such as festivals, dance, theater and other activities attended by mainstream audiences and participants.

The neighborhoods of Boston host a growing number of local expressions of arts and culture with such events as the August Moon Festival in Chinatown and the Wake Up the Earth and Lantern Festivals in Jamaica Plain.

Neighborhood cultural resources have grown substantially with venues and programs such as the Jorge Hernandez Cultural Center in the South End, the Dorchester Center for the Visual Arts, and ZUMIX in East Boston. Churches and religious institutions have also seen their role grow in the cultural life of Boston's neighborhoods through religious worship, social services and as venues for music and art.

Boston's neighborhoods are also seeing a new wave of cultural innovation and leadership in the work of organizations such as MYTOWN, which helps young people to research their own neighborhood and people's history and then create guided walking tours.

Increasingly, Boston's larger cultural institutions are reaching out to Boston's neighborhood-based resources with partnerships and new collaborations. The Boston Center for the Art's Community Arts Initiative seeks to both reflect and attract Boston's Cape Verdean, Haitian and pan-Asian communities. First Night, a New Year's Eve celebration of community, culture and art, has served as the model for arts and cultural programming both nationally and internationally for many years and built strong relationships with the city's neighborhoods.

A new collaborative, Arts, Culture and Trade Roxbury (ACT Roxbury) is a broad consortium including the National Center of Afro-American Artists, the Museum of Fine Arts, the Hamill Gallery of African Art, Northeastern University, Roxbury Community College, the Berklee School of Music, the Massachusetts College of Art, Dudley Square Main Streets, and the Madison Park Development Corporation. These institutions see the arts as a means of building both social and financial capital in the community.

Artists are drawn to live and work in Boston's neighborhoods (and, by their presence, often draw others to live and work there as well), further enhancing Boston's cultural wealth and the vitality of neighborhood life. Artists in Boston both anchor the traditional arts and innovate on the cutting edge, combining art and technology in cyberart, for example. Each fall, Boston's Open Studios Program takes place in the Boston neighborhoods of Roxbury, the South End, Fort Point Channel, South Boston, Jamaica Plain, the North End and Allston, with nearly 1,000 visual artists opening their studios to more than 150,000 visitors.

Perhaps the most vibrant arts and cultural scene in Boston's neighborhoods is one that cannot be measured. It is made up of private, everyday expressions of beliefs, preferences, and heritage. Personal expressions of faith, family gatherings, and music are also essential parts of the cultural life of a place.

Remaining challenges

- **With the increasing importance of the "creative industry cluster" to the economic health of the region, Massachusetts needs well-articulated cultural policies.** Vermont and Providence, Rhode Island are creating policies to attract artists and strengthen cultural programming. Massachusetts and Boston run the risk of losing artists and other creative workers due to the lack of explicitly supportive policies and the high cost of living.

- **Much of Boston's cultural potential remains untapped.** Participation in creating and appreciating art and culture must involve all of Boston's residents across ethnic groups, socioeconomic and disability status and neighborhoods. Established cultural institutions and historically under- served populations could

together create vibrant and inclusive facilities and programs that more fully reflect Boston's cultural diversity.

- **Funding is a major factor in shaping Boston's arts and cultural landscape.** Boston spends less per capita on the arts than ten other major cities, and support for the arts in Boston has been reduced by recent corporate mergers. According to the New England Foundation for the Arts, there is great disparity in funding among downtown and neighborhood-based institutions, and cultural programs are vulnerable during periods of economic downturn. One promising development is the Boston Foundation's Fund for Arts and Culture, a permanent endowment built with major allocations by the Boston Foundation, the Wallace-Reader's Digest Funds and gifts from generous donors. The City of Boston's Office of Cultural Affairs is also addressing these challenges.

- **Boston's cultural institutions, many of which are housed in buildings more than 100 years old, are in dire need of repair**. A 1996 study by the Massachusetts Cultural Facilities Project estimated the cost of repairing, restoring, and maintaining cultural institutions statewide at $216 to $411 million.

- **More attention needs to be given to the creation, installation, and maintenance of public art.** The Massachusetts Cultural Council, the New England Foundation for the Arts' Fund for the Arts, the City of Boston's Brown and Henderson Funds, and the Urban Arts Institute at the Massachusetts College of Art all work with artists and neighborhoods to create and install public art. These efforts will be augmented by Boston's Office of Cultural Affairs' plan to strengthen the cultural sector.

- **Despite the Americans with Disabilities Act, some cultural and recreational venues and events in Boston are not as welcoming or accessible to people with disabilities as they could be**. Inclusive design in restoration and new construction, as seen in the Boston Science Museum, as well as transportation options and street and sidewalk repair, are needed to meet diverse needs and preferences.

- **Boston's ethnic diversity is not often celebrated in citywide events**. In the summer of 2000, Boston hosted its first citywide Multicultural Festival, coordinated by the City's Office of Cultural Affairs. More events that bring people together across cultural traditions are needed to build bridges of understanding.

- **Boston's neighborhoods have historically been very separate**. While boundaries are becoming easier to cross, Boston has a long way to go in encouraging residents to attend cultural events in neighborhoods other than their own.

- **Recent demographic changes have sometimes resulted in a mismatch between recreational facilities and the location of the city's children.** Many Boston neighborhoods have much lower percentages of families with young children than they did decades ago when facilities were being planned, whereas today, more than half of Boston's children live in Roxbury, Dorchester, Mattapan and Jamaica Plain. Moreover, Bostonians today are requesting a different mix of facilities, such as more soccer fields. Assessing population changes and ensuring that residents have preferred recreational options close to home is one of Boston's continuing challenges.

- **The siting of major sports and cultural facilities requires a balance of the needs of teams, fans, patrons and developers with those of all residents and businesses.** In densely built Boston, this can take time and effort. Historically, efforts to find common ground have paid off in improved plans and projects.

- **Resources for leisure-time and recreational activities are often allocated in response to the preferences of boys and men.** This is at the expense of girls and women and a gender-equitable allocation of recreational, arts and cultural resources during and after school.

Cultural Life and the Arts Indicators

2.1 Vibrant Expressions of Cultural Diversity

Boston is one of the nation's most ethnically diverse cities. Its richness and range of ethnic and cultural diversity is deeply rooted in its history. Today, Boston's cultural life represents traditions rooted in its Native American beginnings, that grew with the 16th, 17th, and 18th century cultures originating from England and other parts of Europe, to the 19th century cultures from Ireland, Italy, Germany, Eastern Europe, and China, and more recent influences of Southeast Asian, Central and Latin American, the Carribean, African, Russian, and Central European cultures. The Mayor's Office of New Bostonians notes that there are over 140 languages spoken in Boston.

Cultural expressions and representation in Boston

CENSUS DATA SUGGEST THAT THERE ARE OVER 100 CULTURAL COMMUNITIES REPRESENTED AMONG BOSTON'S RESIDENTS.

See survey on cultural communities on the following pages.

See Appendix for cultural/ethnic groups populations in Boston.

What does this mean?

The survey which follows provides a framework for understanding how Boston's many ethnic and cultural groups express their presence in Boston. It is designed to assess movement along a continuum of cultural expression by tracking their progress as they develop resources to transact their own businesses, move toward reflecting themselves to the larger community, and grow in ways that begin to shape the cultural landscape of the city as a whole. The survey is aimed at capturing the range and diversity of groups in Boston and the presence of the formal and informal networks that enable groups to celebrate their culture, even as they and their traditions become integrated into mainstream society. For this report, only the framework is included. The 2002 report will include the results of the survey.

Cultural/ethnic diversity among the leadership of key sectors in Boston

Sectors include: Arts and Culture; Higher Education; Financial Institutions; Government; Health Care; and Philanthropy.

DATA NOT AVAILABLE AT THIS TIME.

What does this mean?

The reflection of cultural and ethnic diversity in leadership and decision-making positions in Boston's major institutions is a key measure of the acceptance and integration of different groups in mainstream cultural and civic life. It is also an indication of the civic capacity of ethnic and cultural groups to organize and express themselves, to influence the cultural and social landscape of the city, and to provide avenues for the advancement and preservation of Boston's increasingly rich cultural heritage. Representation on the boards of major institutions also ensures sensitivity to the social and cultural needs of different communities and their capacity to influence the cultural life of the city.

Also see Civic Health section.

Vibrant Expressions of Cultural Diversity

Boston is one of the most ethnically diverse cities in the nation.
Below is a list of cultural and ethnic groups in Boston:

Cultural and Ethnic Groups

African-American

African
- Cameroonian
- Cape Verdean
- Egyptian
- Eritrean
- Ethiopian
- Ghanaian
- Kenyan
- Liberian
- Malian
- Moroccan
- Nigerian
- Senegalese
- Sierra Leonean
- Somalian
- South African

American Indian
- Nipmuc
- Wampanog

Asian/Pacific Islander
- Burmese
- Cambodian
- Chinese
- Filipino
- Guamanian
- Hawaiian
- Indian
- Indonesian
- Japanese
- Korean
- Laotian
- Malaysian
- Pakistani
- Taiwanese
- Samoan
- Taiwanese
- Thai
- Vietnamese

Caribbean/West Indian
- Antiguan
- Bahamian
- Bajan
- Bermudan
- Cuban
- Dominican (Dominicana)
- Dominican (Dominican Republic)
- Granadain
- Haitian
- Jamaican
- Monserattian
- Trinidadinan/Tabagoan
- Puerto Rican
- St.Vincent/Grenadines
- U.S. Virgin Islander

Central American
- Belizean
- Costa Rican
- El Salvadoran
- Guatemalan
- Honduran
- Nicaraguan
- Panamanian

European
- Albanian
- Armenian
- Austrian
- Belgian
- Croatian
- Czechoslovakian
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- German
- Greek
- Hungarian
- Irish
- Italian
- Latvian
- Lithuanian
- Norweigan
- Polish
- Portuguese
- Romanian
- Russian
- Scandanavian
- Scottish
- Slovak
- Spanish
- Swedish
- Swiss
- Turkish
- Ukrainian
- Welsh
- Yugolavian

Middle Eastern
- Afganistani
- Iranian
- Iraqi
- Israeli
- Jordanian
- Lebanese
- Palestinean
- Syrian

North American
- Canadian
- Mexican

Oceanic
- Australian
- New Zealander

South American
- Argentinean
- Brazilian
- Bolivian
- Chilean
- Columbian
- Ecquadorian
- Guyanese
- Peruvuan
- Uruguaian
- Venezuelan

World Religions
- Buddhism
- Christianity
- Hinduism
- Islam
- Judaism
- Other

Others

_____

_____

_____

Survey of Cultural and Ethnic Groups in Boston

The goal of this survey is to provide data for a framework to understand how all of the cultural and ethnic groups in Boston express their presence and begin to reshape the cultural and civic terrain of the city and region. It tracks the continuum as groups begin to develop informal resources to transact their own business, move toward reflecting themselves to the larger community, and finally transform their environment.

We ask your help in completing this survey.
Please fill in your cultural or ethnic group from the list on the preceding page and check the community resources that apply to that group. Please xerox and fax the completed copy to Osula Rushing at the Boston Community Building Network at the Boston Foundation 617-589-3616, or contact her with suggestions via phone (617-723-7415) or email (oer@tbf.org). The completed framework will be published in the 2002 Indicators Report.

Cultural or Ethnic Group_____

Impact Continuum	Community Resources
A cultural or ethnic group:	
Develops its own resources to transact its business	___ Informal gathering places ___ Places of worship ___ Residential enclaves ___ Social/cultural/sports clubs ___ Mutual assistance associations/social service agencies ___ Cultural/language learning center(s)
↓	
Develops ways to reflect itself to the larger community	___ Mural (s) ___ Grocery stores, restaurants ___ Shopping districts ___ Language access (banks, hospitals, etc.) ___ Media outlets ___ Performance venues ___ Intercultural or regional festivals ___ Options for observing religious/cultural holidays ___ Holidays acknowledged by the mainstream
↓	
Develops ways to shape the terrain of the city itself	___ Art works of significant public presence ___ Named public spaces or large parks ___ Cultural/historic tours advertised in media ___ Major cultural/civic institutions ___ Political representation

Name:_____

Contact Information:_____
(address, phone number or e-mail address)

2.2 Active Participation in Art Making

Opportunities for active participation in the arts range from the presence of facilities for formal teaching, learning and practicing of visual, musical, or performing art to learning and expressing shared cultural and community values through community-based events and festivals. For Boston to continue its cultural tradition and express the richness of its cultures, it is critical to provide venues, institutions and networks for professional and amateur artists of all ages. Besides preserving cultural heritage and the inter-generational transfer of cultural values, active participation in art-making helps to build a sense of community identity and history. Immigrants are able to reinterpret their cultures in the context of their adopted communities as they work to make these communities their own. In essence, active participation in art making is a tool often used by communities to express themselves in a new or different culture.

Distribution of facilities for making, teaching, learning art, and rehearsal of visual, musical, or performing arts by neighborhood

FORMAL FACILITIES ARE MOSTLY CONCENTRATED DOWNTOWN. NEIGHBORHOODS OFFER OPPORTUNITIES FOR INFORMAL AND SOME FORMAL ENGAGEMENT IN THE ARTS.

See map that follows on location of arts facilities

The map shows the location of nonprofit facilities for active participation in the arts and art making concentrated in the neighborhoods of Central Boston, Back Bay/Beacon Hill, and the Fenway, as well as a clustering in Jamaica Plain.

What does this mean?

In addition to the presence of institutions for formal arts education, Boston offers opportunities for engagement in a wide variety of arts activities and cultural expression. Facilities such as schools, studios, stages, and gallery spaces offer programs that encourage professional artists and amateurs to develop their skills. Institutions such as satellite campuses, community centers, social clubs, and churches offer facilities and networks for community members to express and realize their artistic interests by participating in events and festivals. Boston's informal arts and cultural activities help add to the richness of neighborhood life, build social capital, and create an environment for local economic activity to thrive.

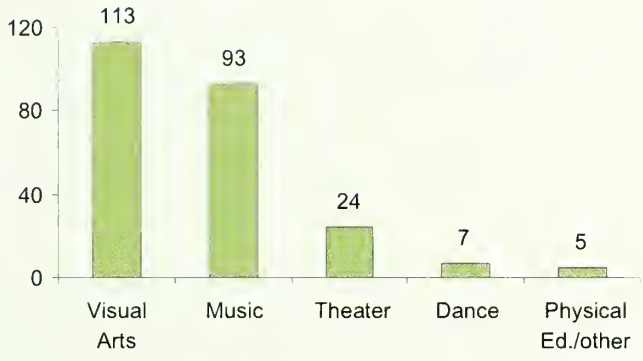
Arts Appreciation Facilities in Boston

Number of dedicated teachers in Boston's public schools and students receiving age-appropriate training in visual arts, music, dance and theater

THE BOSTON SCHOOL DEPARTMENT HAS ABOUT 250 TEACHERS DEDICATED TO THE ARTS, INSTRUCTING 45,000 ELEMENTARY, MIDDLE AND HIGH SCHOOL STUDENTS OR ABOUT ONE FOR EVERY 180 STUDENTS.

The Boston Public School budget includes $8.7 million for arts and culture, which is comparable to the amount provided for after-school athletics, sports, and inter-murals.

Number of arts education teachers in the Boston Public Schools



Source: Boston School Department

Public school students served through arts partnership program activities, school year 1998–1999

	Elementary K–5 grade	K–8	Middle 6–8 grade	High School 9–12 grade
Single Event	59,379	3,959	13,165	5,392
Extended Event	2,737	505	2,253	1,686
Residency	13,444	510	1,360	7,881

Source: Boston School Department

What does this mean?

A 1999 national longitudinal study of the Imagination Project at UCLA— titled Involvement in the Arts and Human Development — indicates positive relationships between arts engagement and academic performance. Also, appreciation and the enjoyment of arts and culture can help reduce stress and create more balanced lifestyles. Based on Boston's Arts in Education Policy adopted in April of 1994, which requires Arts Education as a core component for every Boston Public School student, all 13,500 middle school students (grades 6 through 8) are required to complete six semesters of instruction in the arts (e.g. visual art, theater, dance, and/or music) and pass four semesters of course work. All 17,000 high school students (grades 9 through 12) are expected to complete and pass two semesters of arts instruction, for a minimum of 126 hours. Elementary students receive the most instruction in the arts.

In addition to curriculum-related instruction provided by teachers dedicated to the arts, a wide range of cultural partnerships with institutions provide exposure and assist the Boston public schools in their mission through events and programs in the schools. Students in elementary, K- 8th grade, and middle schools participate as the largest group of attendees at short-term single events, while students in high schools benefit from long-term residencies or extended programs.

Diversity of artists in Boston

MORE THAN 18,000 MEMBERS OF THE ARTS COMMUNITY ARE LISTED BY THE OFFICE OF CULTURAL AFFAIRS.

What does this mean?

The 18,000 working artists listed with the Office of Cultural Affairs reflect a wide range of disciplines such as dance, music, painting, photography, sculpture, and performing arts. They include 1,000 visual artists who participate in open studios, 1,000 singers, musicians, story-tellers, dancers, and other First Night performers, 55 Boston Ballet dancers, and the Boston Crusaders Drum and Bugle Corps. The large number, diverse range, and geographic distribution of artists means that artistic and cultural expression can be found all over in Boston, from street corners, to local clubs and studios in neighborhoods.

2.3 Opportunities for Arts Appreciation

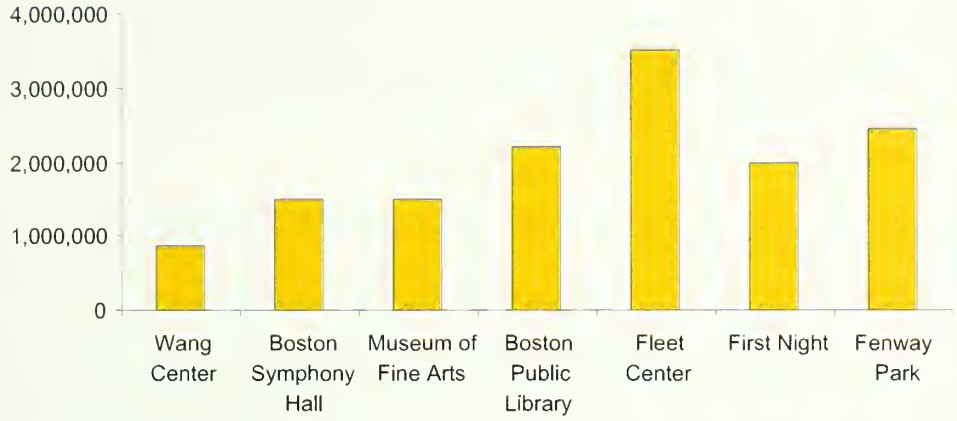
Massachusetts is home to 2,693 arts, humanities and interpretive science organizations, 336 local cultural councils, and thousands of artists and humanists, and Boston is its cultural capital. These abundant and distinct offerings include museums, art galleries, musical performances, street fairs, and clubs, as well as other arts and cultural offerings. Through arts appreciation, viewing of arts and participation in cultural activities, people learn about the different types and forms of expression. Arts activities foster a deeper understanding and appreciation of diversity, provide opportunities for self-development, celebration, and the building of social capital.

Total attendance versus Boston attendees, and free entries/hours for a range of events representing different cultures at major arts and cultural institutions

(Wang Center, Boston Symphony Hall, Museum of Fine Arts, Boston Public Library, New England Conservatory, Fleet Center, First Night, and Fenway Park)

DATA ON SELECTED ORGANIZATIONS INDICATE A HIGH LEVEL OF ATTENDANCE. DATA ON BOSTON ATTENDEES AND FREE ENTRIES/HOURS NOT AVAILABLE AT THIS TIME.

Attendance at some major Boston cultural institutions, 1999



Source: Various sources

What does this mean?

Attendance at large and small institutional events indoors or in neighborhood parks and streets provides opportunities for many people to share new experiences, cultures and traditions, to learn skills, to launch careers, and to break down barriers and build a community of diverse cultures. Boston draws large per capita audiences for ballet, museums, theater and classical music. Thousands come out to watch parades celebrating the Chinese New Year, St. Patrick's Day, saints days, and Caribbean festivals and many other cultural happenings. Between July 1998 and June 1999, almost 77,800 people enjoyed the 139 neighborhood musical events featuring local artists that were sponsored by Boston's Parks Department. Millennium festivities on First Night, for instance, drew an estimated two million people, and nearly 1,000 visual artists opened their studios to the public with over 150,000 people taking advantage of viewing and purchasing their work during annual open studio events in neighborhoods such as the Fort Point Channel in South Boston, the South End, Roxbury, Jamaica Plain, the North End, and Allston.

The availability of special programs for students, families and the elderly tell us about the responsiveness of cultural institutions to make art accessible to a range of people irrespective of people's ability to pay. While no broadly documented data on this is available at this time, the access provided by such programs can be evidenced in sample programs. For instance, in 1999 more than 6,000 Boston students and teachers enjoyed two free youth concerts offered by the Boston Symphony Orchestra, and the Fleet Center distributed about 12,000 free tickets to children and families through community-based organizations.

2.4 Expressions of Spirituality

Expressions of spirituality are closely linked to peoples' cultural, religious, and personal beliefs. They can range from worship, prayer and meditation to immersing oneself in the beauty of nature, music, the arts, solitude, work, or service. The practice of spirituality takes one's focus away from "self" and allows for the appreciation of the world and the people around us.

Percent of Bostonians who feel spirituality and faith-based activities are an important part of their lives

OVER 50% OF BOSTON YOUTH SURVEYED CONSIDER SPIRITUALITY AND/OR RELIGION AS IMPORTANT TO THEIR LIVES.

SURVEY DATA FOR ADULT POPULATIONS NOT AVAILABLE AT THIS TIME.

What does this mean?

In a multi-ethnic, multi-cultural community such as Boston, it is important to ensure that people have the ability and the space within which they can express or practice their own forms of spirituality. The Annual Boston Youth Survey of 1000 Boston youth, conducted by the City's Office of Community Partnerships, shows a movement towards faith and spirituality. Data from the 1999 survey indicates that 55% of youth surveyed considered religion as important or very important to them, 53% considered themselves spiritual, and 47% attended a religious service at least a few times a month.

Number of religious institutions and organizations per 1,000 persons, by neighborhood

ROXBURY AND DORCHESTER CONTAIN BY FAR THE LARGEST NUMBER OF FAITH-BASED ORGANIZATIONS; CENTRAL BOSTON NEIGHBORHOODS HAVE THE LARGEST NUMBER PER 1,000 RESIDENTS, DRAWING WORSHIPPERS WIDELY.

Number of religious institutions and organizations per 1,000 persons by neighborhood

Source: New England Foundation for the Arts

What does this mean?

Symbols of faith and spirituality are visible throughout Boston's neighborhoods. Churches and religious institutions see a role for themselves in the civic and cultural life of Boston's neighborhoods. The roles of faith-based institutions have broadened from religious worship and service, to also serve as a venue for music, art, the celebration of culture and heritage, and for developing collaborations to address societal problems. Central Boston and many other neighborhoods draw worshippers from well beyond their borders.

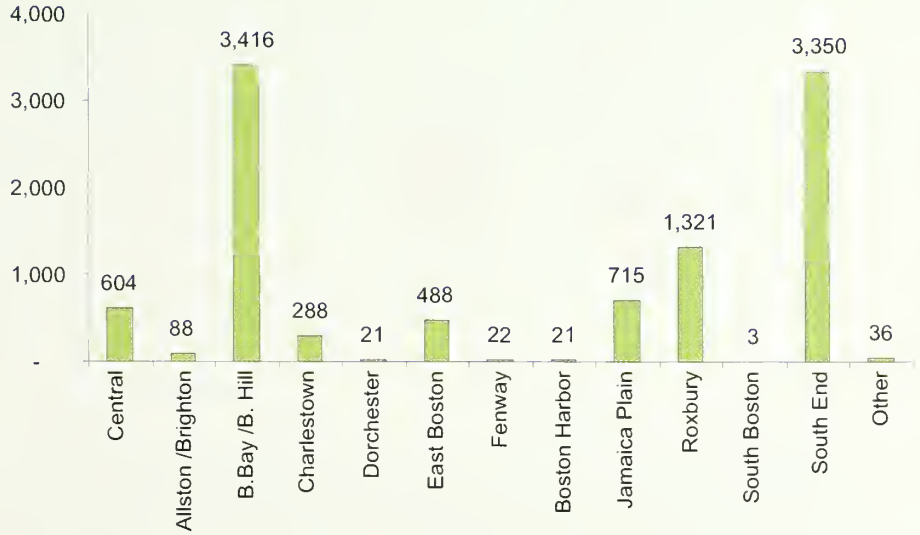
2.5 Protected Historic Sites and Architectural Heritage

Boston's historic resources contribute greatly to the economy of the city, the quality of life for its residents, and an understanding of the historical and cultural foundations of the city. Recognizing the city's historic character, Bostonians have acted to preserve a considerable number of historic and architecturally significant districts and individual sites. Most of Boston's neighborhoods contain sites with historic landmark designations. The Old North Church, the Old State House, the Freedom Trail, Paul Revere's House, and the recently designated Malcolm X House are all tourist destinations.

Number of historically and architecturally significant sites and historic districts, by neighborhood.

THERE ARE 10,338 APPROVED SITES IN BOSTON ON THE NATIONAL REGISTER OF HISTORIC LANDMARKS. THEY INCLUDE GRAVE SITES, HOUSES, LANDSCAPES, BUILDINGS AND OBJECTS, AS WELL AS HISTORIC DISTRICTS.

Historically and architecturally significant sites by neighborhood, 1999

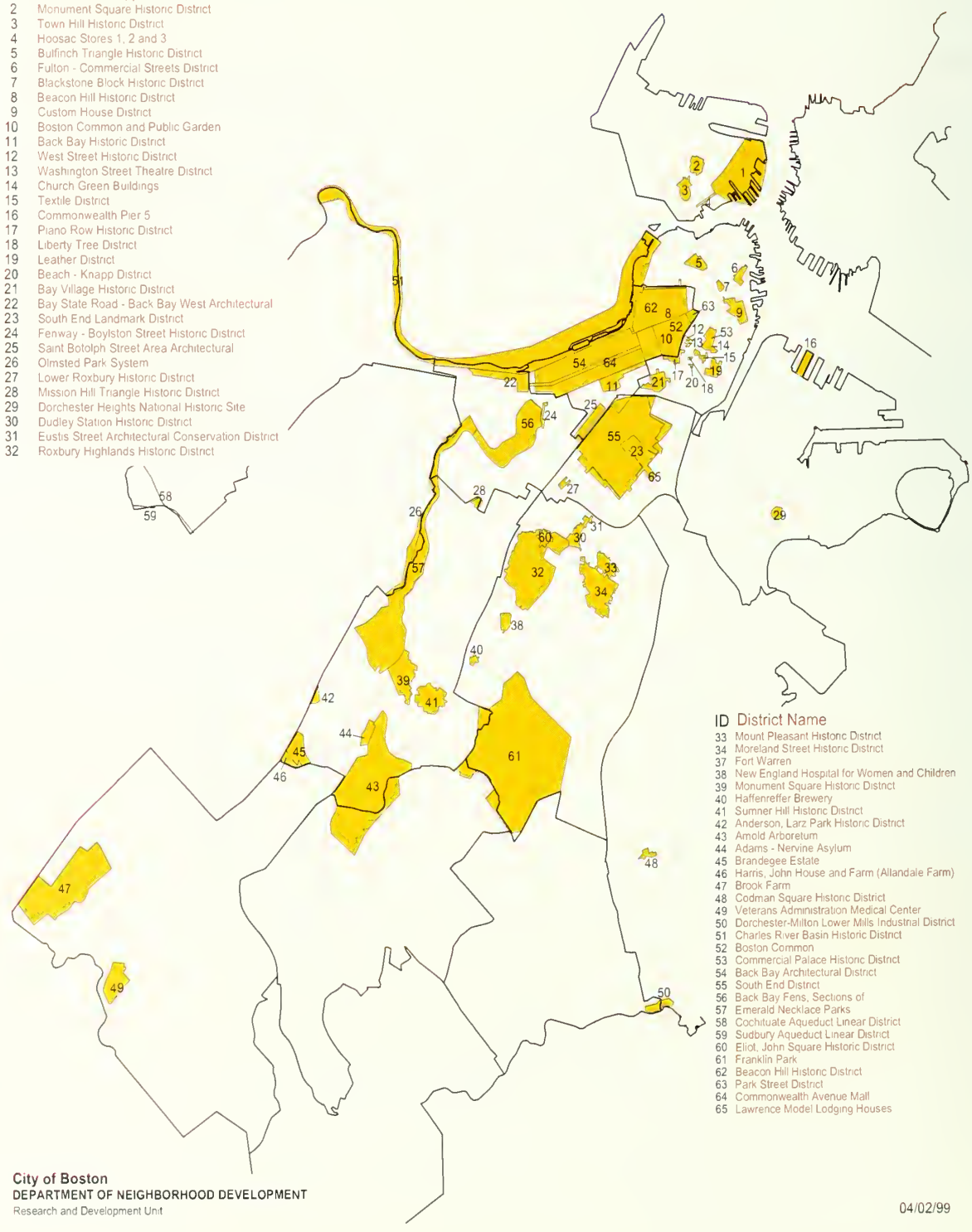


Source: Boston Landmarks Commission

Also see map on Historic Districts that follows.

Historic Districts in Boston

ID	District Name
1	Boston Naval Shipyard
2	Monument Square Historic District
3	Town Hill Historic District
4	Hoosac Stores 1, 2 and 3
5	Bulfinch Triangle Historic District
6	Fulton - Commercial Streets District
7	Blackstone Block Historic District
8	Beacon Hill Historic District
9	Custom House District
10	Boston Common and Public Garden
11	Back Bay Historic District
12	West Street Historic District
13	Washington Street Theatre District
14	Church Green Buildings
15	Textile District
16	Commonwealth Pier 5
17	Piano Row Historic District
18	Liberty Tree District
19	Leather District
20	Beach - Knapp District
21	Bay Village Historic District
22	Bay State Road - Back Bay West Architectural
23	South End Landmark District
24	Fenway - Boylston Street Historic District
25	Saint Botolph Street Area Architectural
26	Olmsted Park System
27	Lower Roxbury Historic District
28	Mission Hill Triangle Historic District
29	Dorchester Heights National Historic Site
30	Dudley Station Historic District
31	Eustis Street Architectural Conservation District
32	Roxbury Highlands Historic District



ID	District Name
33	Mount Pleasant Historic District
34	Moreland Street Historic District
37	Fort Warren
38	New England Hospital for Women and Children
39	Monument Square Historic District
40	Haffenreffer Brewery
41	Sumner Hill Historic District
42	Anderson, Larz Park Historic District
43	Arnold Arboretum
44	Adams - Nervine Asylum
45	Brandegee Estate
46	Harris, John House and Farm (Allandale Farm)
47	Brook Farm
48	Codman Square Historic District
49	Veterans Administration Medical Center
50	Dorchester-Milton Lower Mills Industrial District
51	Charles River Basin Historic District
52	Boston Common
53	Commercial Palace Historic District
54	Back Bay Architectural District
55	South End District
56	Back Bay Fens, Sections of
57	Emerald Necklace Parks
58	Cochituate Aqueduct Linear District
59	Sudbury Aqueduct Linear District
60	Eliot, John Square Historic District
61	Franklin Park
62	Beacon Hill Historic District
63	Park Street District
64	Commonwealth Avenue Mall
65	Lawrence Model Lodging Houses

City of Boston
DEPARTMENT OF NEIGHBORHOOD DEVELOPMENT
Research and Development Unit

04/02/99

What does this mean?

Boston is filled with winding streets, brick structures, statues, and monuments. Its distinctiveness comes from these historic structures and the events associated with them. Boston's heritage and its architectural beauty are integral components of its present and future. Many of these areas have been designated as Historic/Architectural Conservation Districts. They include: Beacon Hill; Back Bay; South End; St. Botolph street; and Bay Village in central Boston; the Eustis Street, Mount Pleasant and Fort Hill Areas in Roxbury; and the Mission Hill Triangle. Overall 10,388 sites in Boston have received landmarks designation, with several more on the waiting list. Another emerging aspect of historical documentation in Boston is the older and recent histories of neighborhoods and communities. Organizations such as MyTown are working with young people to research and document oral histories of residents to capture the richness, cultural diversity and heritage of Boston's resident population.

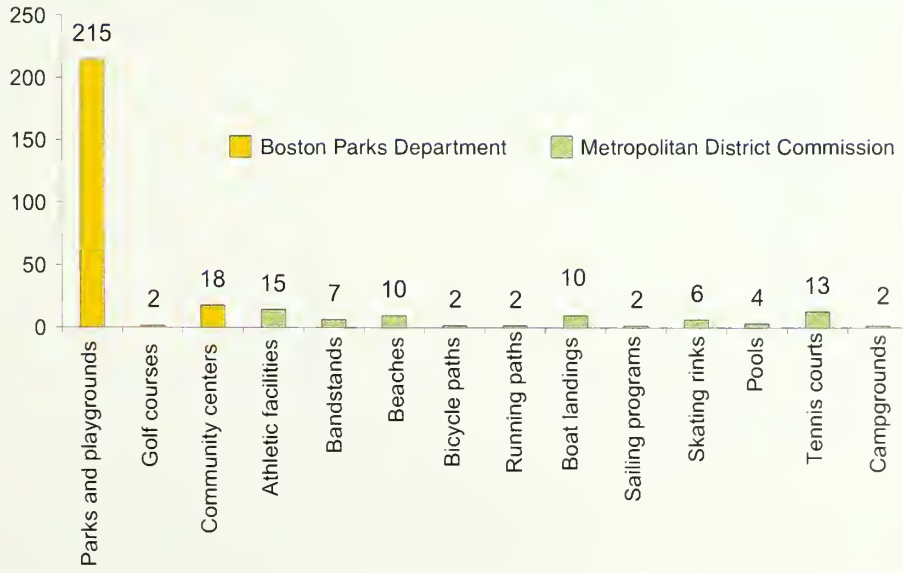
2.6 Access to a Broad Range of Leisure Activities

Boston has a wide range of options for leisure activities. These range from playing sports, riding bicycles, walking, jogging, swimming, sailing, roller-blading, skiing, sledding, flying kites, reading outdoors, and touring historic places to simply enjoying the urban experience, going to book shops, movies, eating out, as well as a myriad of other active and passive recreational pursuits. Regardless of income, people from all neighborhoods can take a subway to the beaches, a ferry boat to the Harbor Islands, a bus to playgrounds, athletic fields and courts, or take walking tours of historic neighborhoods.

Distribution of parks and recreational facilities in Boston's neighborhoods

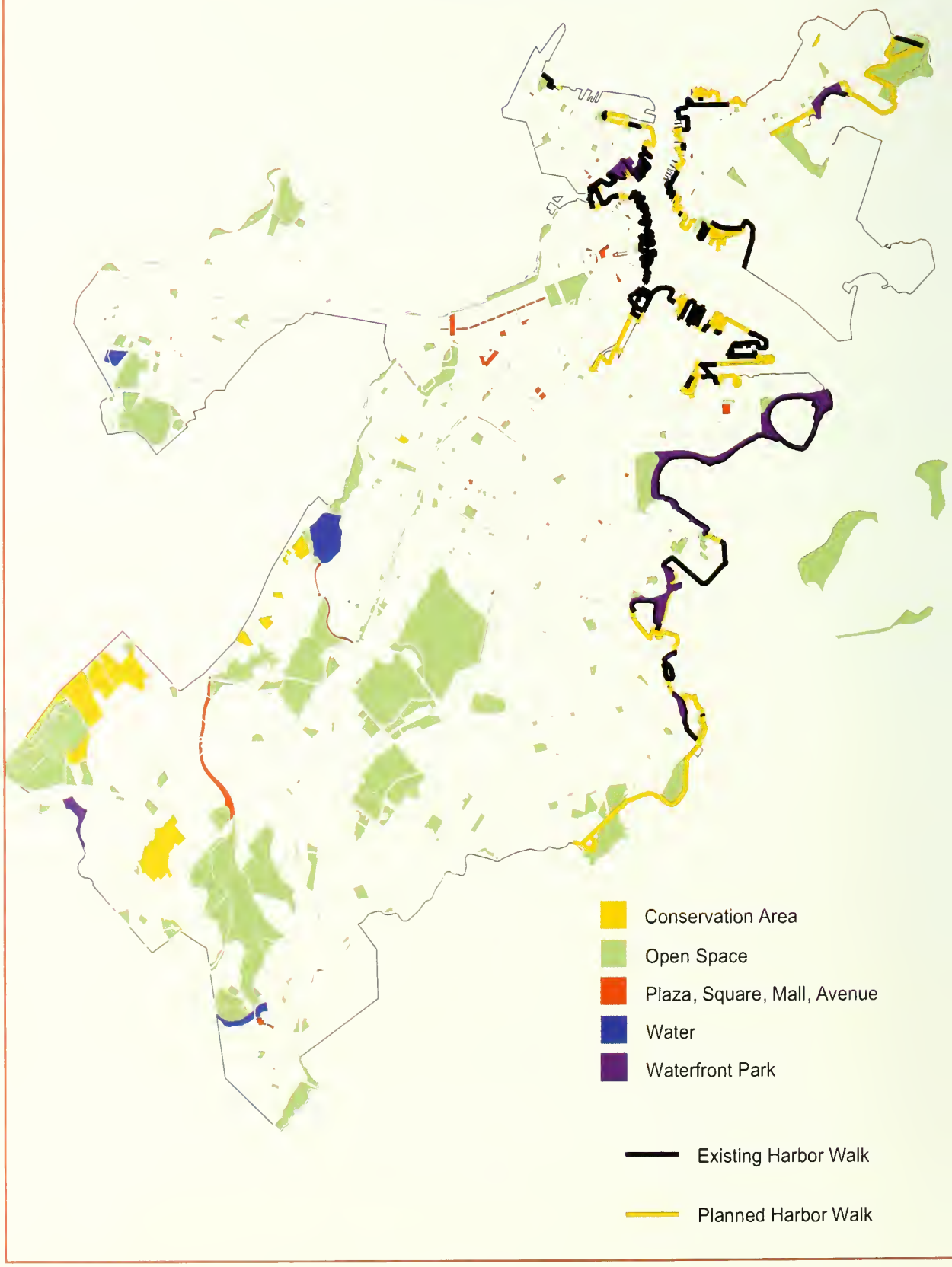
MOST BOSTON NEIGHBORHOODS HAVE A HEALTHY DISTRIBUTION OF PARKS AND RECREATIONAL FACILITIES, AS WELL AS GOOD PUBLIC TRANSPORTATION ACCESS TO SOME OF THE CITY'S MAJOR RECREATIONAL FACILITIES.

Number and range of recreation facilities in Boston



Source: Boston Parks & Recreation Department and Metropolitan District Commission

Recreational spaces in Boston



What does this mean?

Because of the wide variety and distribution of facilities in Boston's neighborhoods and proximity to the public subway and bus systems, most people in Boston can get to a wide range of leisure activities during all seasons of the year. Some neighborhoods such as Chinatown and the South End, however, have far less open space than other neighborhoods (see Environment Section). A good distribution of public parks, athletic fields and courts, bicycle paths, swimming pools, ice skating rinks, and other public recreational facilities is key to providing opportunities for social interaction, good mental and physical health of residents, and healthy communities.

Number of hours worked per week versus hours spent in leisure activity

WORK AND FAMILY TIME ARE CHANGING. THE AVERAGE AMERICAN IS WORKING MORE, BETWEEN 1.5 WEEKS TO ONE MONTH MORE PER YEAR THAN IN THE 1970S, LEAVING LESS TIME FOR FAMILY AND LEISURE ACTIVITIES. HOWEVER, SOME OF THIS IS IN BOUTS OF OVERWORK, AND MANY LOW-SKILLED WORKERS ARE UNDEREMPLOYED.

SURVEY DATA FOR BOSTON NOT AVAILABLE AT THIS TIME.

What does this mean?

According to a 1997 study titled, *"Overworked and Underemployed: Unraveling an Economic Enigma,"* by economists Barry Bluestone and Stephen Rose (Northeastern University), the nature of work is changing in America. Men are working overtime to compensate for expected job losses in the future; women have expanded their work efforts to cover for what might otherwise be a sharp decline in family "living standards." The study suggests that though Americans are working harder, the extra hours worked are not producing a higher standard of living for families or more hours for recreation or leisure activities. Instead there is a greater likelihood of families using the extra earnings to pay for the rising the cost of living.

Given Boston's high cost of living on the one hand and its wealth of cultural and leisure activities on the other, it is important to understand how much Bostonians can use local cultural and recreational assets and how well they are able to balance hours worked with leisure and family time.

Street performer and vendor permits issued by neighborhood

DATA NOT AVAILABLE AT THIS TIME.

What does this mean?

Vibrant streets make for a safe city and enrich urban lifestyles. As people wait for a bus or the subway, or walk down to the neighborhood Main Street for an errand, the presence of street artists and vendors adds a level of enjoyment and a unique urban experience to daily life, as well as income for the artists. Street performances encourage spin-off economic activity as people are drawn into the city. In fact, many street performances are sponsored by local merchant associations to help attract customers and increase business while offering an inexpensive form of leisure activity.

Number of cafes, pubs, bookstores, music stores per 1,000 persons by neighborhood

DATA NOT AVAILABLE AT THIS TIME.

What does this mean?

Some of the most popular leisure time activities are browsing in shops, sitting in a café with a leisurely cup of coffee, and spending time with friends. Neighborhoods with business districts that offer such choices attract people from out of their homes and into the heart of the community. These activities contribute to the safety of the neighborhood and help increase social interactions and therefore build social capital that is in turn invisibly "banked" for future civic action.

2.7 Opportunities for Athletic Participation

Sports and athletic activities are central to the life of many Bostonians — from active participation in neighborhood pick-up games, to organized sports teams and leagues, to being an ardent fan of a professional sports team. Many Boston Community Centers provide swimming facilities and other activities. People can be seen exercising, jogging, bicycling, roller blading, and walking in the early morning, evening, and on weekends along the Charles River Esplanade, around the waterfront at Castle Island, at Jamaica Pond, and the Fens. Boston's sports institutions offer opportunities for ice-hockey, baseball, basket ball, boating, and golf tournaments. Newcomer groups have increased the popularity of sports such as soccer and cricket. One constant in Boston is its high degree of sports enthusiasm.

Total attendance versus Boston attendees for events at Boston sports institutions

IN 1999, FLEET CENTER ATTRACTED OVER 3.5 MILLION PEOPLE AND FENWAY PARK BROUGHT OVER 2.2 MILLION PEOPLE TO EVENTS.

DATA ON LOCAL ATTENDANCE IS NOT AVAILABLE AT THIS TIME.

What does this mean?

Boston is home to various sports teams including the Celtics, the Bruins, and the Red Sox — which attract a large number of people from Boston's neighborhoods as well as, from the region. In 1999, over 5.7 million people attended sports events in Boston. These events generate spin-off economic activity, as well as produce local impacts such as traffic and noise. Tracking data about local attendance can give us a better understanding about the costs and/or benefits to the local community.

Number of sports leagues, clubs, and teams by neighborhood

BOSTON HAS A RANGE OF OPPORTUNITIES FOR ACTIVE INVOLVEMENT IN THE SPORTS.

NEIGHBORHOOD DATA IS NOT AVAILABLE AT THIS TIME.

What does this mean?

Organized sports offer the opportunity for personal challenge and group involvement. Healthy bodies and minds translate into lower health care costs, reduced stress, greater productivity, and an improved quality of life. Studies have also shown that young people involved in sports do better in school.

Boston has a wealth of opportunities. For instance, more than 153,000 young skiers have learned to ski from the urban outdoors program YES. Over 100,000 people of all ages skated on Frog Pond in Boston Common in 1999. The Sportsman's Tennis Club is a nonprofit organization that provides lessons to eager Boston youth. In 1999, through the Boston Community Centers' Swim Challenge and Citywide Swim Program, more than 5,400 children received swim assessments, 350 children participated in the Co-ed Developmental Swim League, 110 were Lifeguard Interns, and 25 received lifeguard training for water safety and coaching certification. In a typical year, 3,500 adults and 1,450 junior members from 30 communities, spanning all economic levels and ethnic groups in the Metro-Boston region, sail on the Charles River.

2.8 High Economic Impact of Arts, Culture, and Sports Activity

The arts, sports, and cultural industries play a critical role in ensuring Boston and the New England region's economic competitiveness in the global markets. Arts and cultural enterprises — both nonprofit and commercial — form the Creative Industries cluster. In addition to generating local revenues, this cluster exports cultural products and services, and brings new income to businesses and residents.

Total revenues generated by ticket sales and secondary activities (food and parking) for Boston's cultural and sports events

A 1996 STUDY INDICATED THAT MASSACHUSETTS' NONPROFIT CULTURAL INDUSTRY GENERATES AN ANNUAL ECONOMIC IMPACT OF $2.56 BILLION.

DATA FOR BOSTON NOT AVAILABLE AT THIS TIME.

What does this mean?

In 1996, Massachusetts' nonprofit cultural industry had an economic impact of $2.56 billion. According to a 1997 study by the National Endowment for the Arts, arts participation rates in New England are among the highest in the country. Cultural activities play a significant role in attracting 28 million tourists to the region each year, helping to make tourism Massachusetts' third largest industry. According to a 1998 study, three out of 10 tourists lengthen their trips because of opportunities to enjoy cultural activities.

Number of jobs created and wages generated by organizations and businesses in arts, culture, and sports

THE NUMBER OF JOBS IN NEW ENGLAND'S CREATIVE INDUSTRIES IS ROUGHLY EQUIVALENT TO THE NUMBER OF JOBS IN THE REGION'S BIOTECHNOLOGY AND MEDICAL DEVICES INDUSTRIES COMBINED (1.2 % OF THE ECONOMY).

DATA FOR BOSTON NOT AVAILABLE AT THIS TIME.

What does this mean?

The growing cultural industries cluster brings jobs and revenues to the city through hotels, restaurants and service-related businesses, and to artists themselves. International visitors' spending on entertainment and recreation is estimated to generate 5,000 jobs in New England.

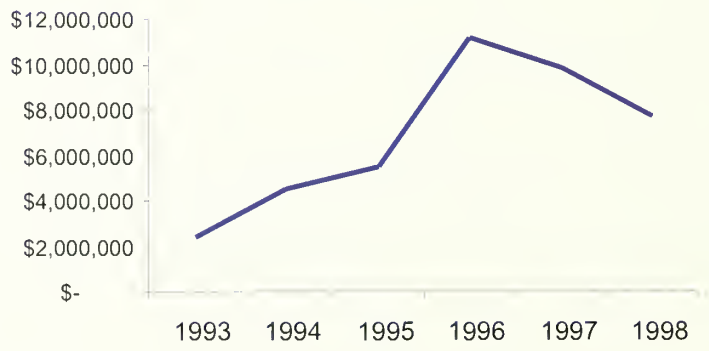
2.9 Strong Financial Support and Participation

In a recent national survey, young professionals selected Boston as the best place to live. Respondents highlighted opportunities to participate in arts and culture as the number one reason for that choice. While there is increasing awareness that Boston's economy, labor force, and its quality of life depend on its arts and cultural life, financial support for arts and cultural activities, institutions, organizations, programs, and artists continues to lag behind. A recent survey conducted by the City's Office of Cultural Affairs concluded that among ten major cities surveyed — New York, Dallas, San Diego, Miami-Dade County, Chicago, Baltimore, Philadelphia, Washington and Boston, Boston has the lowest per capita spending (at 92 cents per capita per year) on the arts. Without public and private funding, many of the activities, events, programs, courses, training sessions, and neighborhood festivals would not be possible.

Distribution of financial support for arts and cultural activities for Boston and by neighborhood

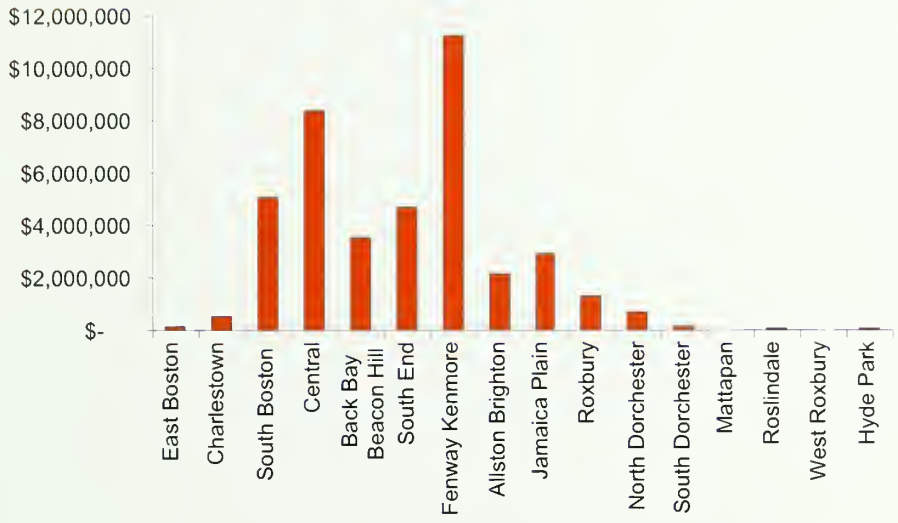
IN BOSTON, ARTS FUNDING FROM LOCAL, STATE, AND NATIONAL SOURCES HAS DECLINED. FUNDING FOR CULTURAL ACTIVITIES IS CONCENTRATED IN DOWNTOWN BOSTON, THE HOME OF MAJOR CULTURAL INSTITUTIONS.

Financial support for arts and culture activities in Boston, 1993–1998



Source: New England Foundation for the Arts

Distribution of financial support for arts and cultural activities, by neighborhood, 1998



Source: New England Foundation for the Arts

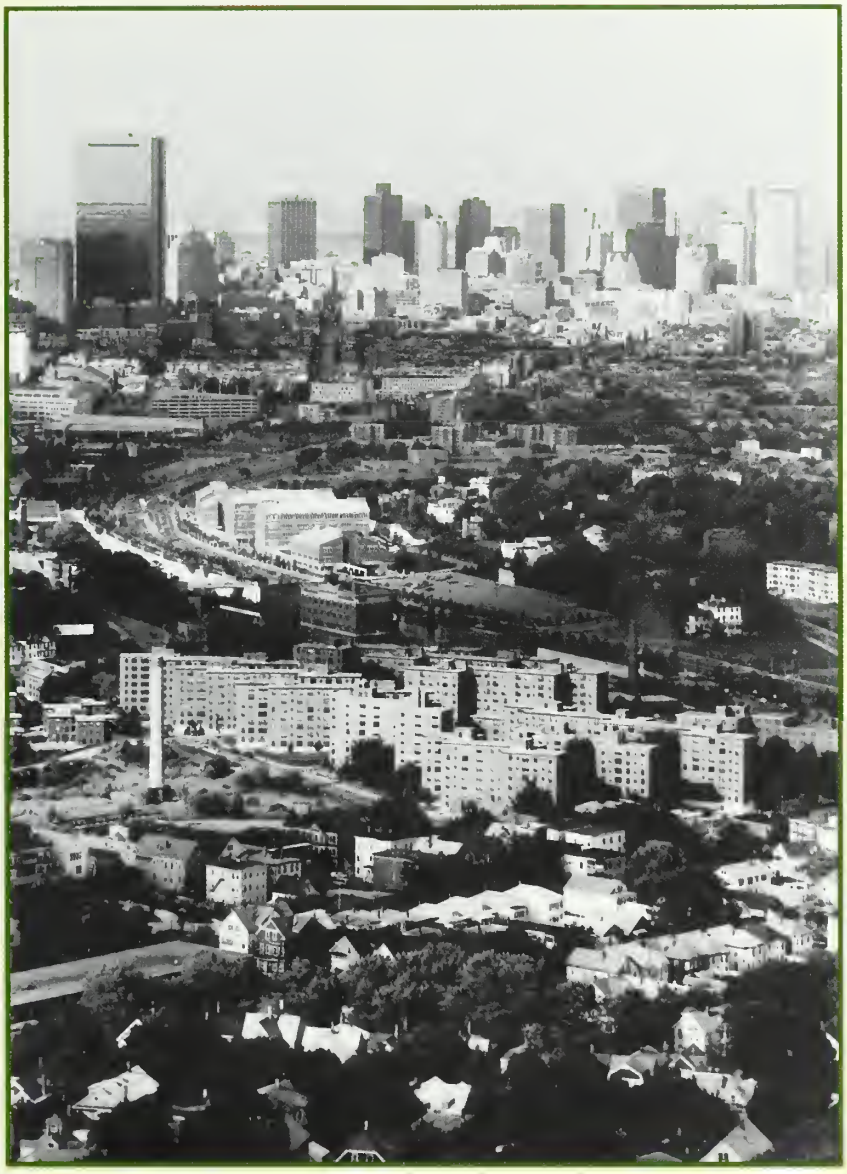
What does this mean?

Nationally, culture and arts represent 10% of corporate giving. According to preliminary research, U.S. corporate funding of the arts decreased by 2.75% in 1997 even though corporate giving overall increased by 7.5%. Corporate giving for the arts and culture in Boston tends to focus on major events and institutions that serve a regional audience.

The New England Foundation for the Arts completed an analysis of funding from all sources between 1993 and 1998. The analysis included all sources combined: the Mayor's Office of Cultural affairs; the Boston Foundation; the Boston Globe Foundation; the Retshefsky Foundation, the Lef Foundation; the Massachusetts Cultural Council, the New England Foundation for the Arts, and 39 various (public and private) sources of funding at the national level. In 1999, the National Endowment for the Arts awarded 8% of its funds to New England's museums, cultural institutions, universities and artists, and the National Endowment for the Humanities gave out 13% of its funds to New England. State government support for the arts in Boston for 1999 was at $329,351, and the City of Boston's support was $551,309. In the year 2000, the City of Boston's budget for Cultural Affairs was increased by 37%.

SECTION THREE

Economy



Vision

A community that promotes economic prosperity and a high quality of life for all, with opportunities to advance in the competitive global economy.

Indicators of Sustainable Prosperity	Measures	How Is Boston Doing?
3.1 Strong, Diverse Economy	■ Employment in Metro-Boston by industry sector	■ Professional and financial services comprise over 45% of the 1.7 million jobs in Metro-Boston
	■ Employment growth in Boston by industry sector	■ Boston added 113,000 jobs in diverse industries from 1992-99
3.2 Low Unemployment	■ Unemployment rate in Boston	■ Boston's unemployment rate was 3.3% in 1999, a record low
3.3 Opportunity for All Residents	■ Occupations of Boston residents compared to suburban residents	■ Commuters hold 61% of the jobs in Boston, including most of Boston's professional services jobs. Boston residents hold 39% of the local jobs
3.4 Adequately Prepared Workforce	■ Educational attainment in Boston	■ As of 1990, 30% of Boston residents had a college degree and nearly 50% had some college experience
3.5 Affordable Cost of Living	■ Median household income adjusted for cost of living	■ Boston's higher-than-average income vanishes due to high costs of living
3.6 Family Self-Sufficiency	■ Family self-sufficiency rate in Boston	■ One-third of Boston's families have incomes that do not fully cover living costs
3.7 Low Poverty Rates	■ Poverty rate in Boston	■ In the last recession, between 1990 and 1993, Boston's 1990 poverty rate of 18.7% rose by 1.2 %
	■ School lunch participation	■ The number of BPS students receiving free/reduced price school lunches increased between 1997 and 1998
3.8 Successful Neighborhood Economies	■ Purchasing power of neighborhoods	■ Boston's low-income/high-density neighborhoods have higher purchasing power than suburbs and low-density neighborhoods
3.9 Economic Equity for All Bostonians	■ Income gap expressed through the GINI Index	■ The income gap in Boston increased in each of the last two Censuses
	■ Boston's unemployment rate by race	■ Unemployment rates for blacks and Latinos were twice that for whites
	■ Per capita income by race	■ Racial minorities have a lower median income than whites
3.10 Economic Equity in Boston's Neighborhoods	■ Family poverty rates by neighborhood	■ Poverty rates in Boston's neighborhoods declined from 1980 to 1990 in relation to the city average
	■ Unemployment rates by neighborhood	■ Unemployment rates vary significantly by neighborhood
	■ Educational attainment by neighborhood	■ Educational attainment rates vary widely by neighborhood

Boston's Economy

Historical context

Boston today is one of the most economically and ethnically diverse, urbane and desirable cities in the country. Its economy has proven to be remarkably resilient despite a long recession from the 1920s to the 1950s.

The gradual loss of the shoe, textile and brewery industries led city leaders in the late 1950s to develop a plan for the New Boston. Construction of the Prudential Center in 1964 heralded Boston's future as a center of financial services and emerging industries, adding to its status as an internationally renowned center for medical care and higher education.

These plans were honed by subsequent generations of civic and community leaders, with assistance from the expanding high-tech economy and Boston's third great wave of immigration. As a result, Boston's downtown and neighborhoods have been transformed and the economy is booming. Boston's rising cost of living, however, threatens to destabilize many of its long-time residents and lower-skilled workers.

Regional context

The economic engine of New England, Boston is one of the few cities in the nation that doubles its population each working day as people stream into the city.

With only 10% of Massachusetts' population, Boston produces 22% of the state's goods and services, generates 18% of its tax revenue, and employs 17% of its workers.

In addition to the industries for which New England and Massachusetts are traditionally known, the regional economy is strengthened by innovation coming out of the region's colleges, universities, and research institutions.

The Massachusetts Technology Collaborative, in its 1999 "Index of the Massachusetts Innovation Economy," tracked the impact of innovation through nine key industry clusters critical to Massachusetts' future economic growth. These nine clusters, in order of the total number of employees in each, include financial services, post-secondary education, software and communications services, innovation services, computers and communications hardware, diversified industrial support, textiles and apparel, healthcare, and technology and defense. Together, these nine clusters account for 24% of all non-governmental jobs in Massachusetts, employing more than 660,000 residents. According to the report, "these clusters are more highly concentrated in Massachusetts than in the nation overall and are potential sources of competitive advantage for the state's economy." As an example of this, graduates of the Massachusetts Institute of Technology create about 150 new companies in the area every year.

The region exports goods and provides services such as biotechnology, Internet products, media and telecommunications products, professional services, financial services, health care and education to customers worldwide. Each of these industries is expected to experience strong growth in the coming decade, but all require a highly trained work force to grow companies to successful maturity.

As a result of this rapid change, residents of the region are experiencing the two-pronged impact of the new global economy. Some households are enjoying newfound prosperity while others are struggling to maintain their current standard of living. In general, the regional economy is laden with jobs that are either well-paying, requiring a high degree of skill and education, or low-skill jobs that do not pay enough to support a family. For a worker without a college education, there are fewer opportunities to find a job between these two extremes.

Also, while the Eastern and Central regions of the state are generally succeeding in the new economy, the Western and Southeastern parts of the state have not recovered from the loss of manufacturing jobs. In 1984, Massachusetts had 660,000 manufacturing jobs representing 25% of the jobs in the state, today it has 450,000, or about 15%. New technologies and automation add productivity and require fewer but more

skilled workers. A recent report by MassDevelopment, Associated Industries of Massachusetts, the Massachusetts Alliance for Economic Development, and the Massachusetts Technology Collaborative emphasizes the importance of education and training in sustaining the state's manufacturing sector, which still pays one-third more than other blue-collar jobs. To address the need for more highly trained workers, the Greater Boston Manufacturing Partnership created a program to help upgrade workers' skills and match skilled labor with good jobs in the manufacturing sector. Partnering with the Essex County Community Organization, it created the successful E-Team Machinist Training Program and is now designing a similar program for the high-tech manufacturing sector.

For those left behind, there are few such bridges to the new economy. The large number of Massachusetts workers without basic literacy or English language skills creates a severe drag on the region's new economy, which requires a constant supply of high-skilled workers. According to the Massachusetts Department of Education, 977,000 adults in the state are functioning in the year 2000 at fifth-grade skill levels or below, yet have insufficient access to adult basic education. In 1999, only 24,000 adults were able to access basic education classes. State funding for adult basic education has increased from $4 million to $30 million, but 10,000 people remain on waiting lists. Many other residents are on waiting lists for English as a Second Language (ESL) classes. And, according to the think tank MassINC, Massachusetts ranks 39th among all states in financing for employer-focused worker training.

Citywide focus

Like many of its Northeastern counterparts, Boston has transformed itself from a manufacturing economy to one based on services and information technology.

Currently in its eighth year of economic boom, the city has capitalized on the strong national and regional economies, especially the booming mutual fund industry. Unemployment in 2000 is down to a record low 3.1%, downtown office vacancy rates are below 2%, and the number of jobs in the city has never been higher than its current 689,323.

The reason for the boom is simple. Boston is rich in the fastest growing industries and has the resources to support these industries. Financial and professional services, along with world-renowned educational and medical institutions, are Boston's primary export industries. The positions available in these industries usually require a college, graduate, or professional degree. Consequently, the compensation for these jobs is quite high. The average salary for a job in financial services was almost $69,000 in 1998.

Most of the higher paying jobs in Boston now require a college degree — something that 70% of Boston's workers do not have. That is the downside to the Boston economy's shift from manufacturing to cutting-edge technologies, emerging industries and financial services. Between 1980 and 1990, Boston lost half of its manufacturing jobs as firms automated or moved their operations to areas of non-union labor and lower taxes. Manufacturing jobs in Boston, as in the state as a whole, still pay about one third more than other blue-collar jobs, but there are fewer of them. Many workers previously employed in manufacturing are finding it difficult to earn enough money to support a family, especially in the context of Boston's rising cost of living.

Neighborhood focus

While each of Boston's neighborhoods has benefited from recent prosperity, great disparities exist among neighborhoods and racial groups. The unemployment rate in some of Boston's neighborhoods is one and one half times the city's average, in others it is less than half.

Unemployment rates among whites are almost half that of people of color. Median household income in some neighborhoods, such as Beacon Hill and Back Bay, is a third higher than the city average, while in Roxbury it is only 70% of the city average.

Rising home prices, the loss of rent control and narrowing state and federal eligibility for public assistance are undermining the economic security of many of Boston's families. Welfare reform is also beginning to take a toll on some families, as well as on small businesses that provide staples to low-income households and landlords, who rent to low-income families without subsidies.

Recent research by the Boston Consulting Group in partnership with the Initiative for a Competitive Inner City (ICIC) also found that inner city shoppers sometimes pay as much as 40% more for basic grocery items than their suburban counterparts. On the other hand, they found that that Boston's densely populated low-income neighborhoods such as Roxbury and Dorchester are higher in total buying power than low-density, high-income neighborhoods such as West Roxbury, and that a high percentage of neighborhood income is spent elsewhere, often well beyond the city limits.

When stores do cater to inner-city preferences, they can be among the most profitable. In 1998, the Super Stop & Shop adjacent to Roxbury and Dorchester was the highest grossing store in its 186-store chain; the Kmart in the same complex was the highest grossing store of its kind in Massachusetts. ICIC concludes that by focusing on commitment, leadership, tailoring to local customers, and operational excellence, inner-city businesses can attain high rates of success. This theory is being proven by such local businesses as Bob the Chef's and America's Food Basket, which offers its multicultural clientele 25 varieties of rice. ICIC estimates approximately $398,000,000 in unmet demand for goods in Boston's inner-city alone, with the potential for 3,820 new retail jobs. That potential is beginning to be tapped by local developers. The Grove Hall Neighborhood Development Corporation's Grove Hall Mall will soon open, and the Crosstown Development in Boston's Empowerment Zone will bring new shopping and entertainment opportunities to Boston's Empowerment Zone and adjacent neighborhoods.

A major effort to strengthen neighborhood business districts and provide new job and shopping opportunities to residents is seen in Boston's Main Streets Program. Established by Mayor Menino in 1996, it now operates in 19 Boston neighborhood business districts and helped start 108 new businesses in 1998 alone. It has also assisted hundreds of small businesses with facade improvements, and advertises neighborhood goods and services to shoppers citywide. Many of these businesses reflect the neighborhoods' changing demographics and the entrepreneurial energy of newcomer immigrant groups.

Boston contains about 30 community development corporations, many of which are involved in projects that provide stability to and anchor small business and other development. Boston is also fortunate to have neighborhood-based financial institutions such as Boston Community Capital, and community investment partnerships with local banks. Recent mergers among the region's largest banks is raising concerns about the long-term viability of these commitments.

Other approaches to economic development in Boston's neighborhoods include job training by community-based organizations, economic literacy courses and a new focus on wealth creation, such as programs encouraging homeownership and investment in personal or family development accounts.

In 1994, thirty of Boston's lowest-income census tracts — parts of South Boston, Chinatown, the South End, Lower Roxbury, Roxbury, Dorchester and Mattapan — were designated an Enhanced Enterprise Community by the U.S. Department of Housing and Urban Development (HUD). In 1999 the area, which contains about 10% of Boston's population, was designated by HUD as a full Empowerment Zone. Boston was awarded $100 million over ten years in support of a coordinated plan to enhance residents' economic opportunities.
The City of Boston and a newly elected Community Board plan to use these funds to leverage considerable additional private and other public resources, but Congress has been slow to actually appropriate the promised support.

Remaining challenges

- **With unemployment running at 2.5% in 2000, Massachusetts lacks workers to support the growth tip of its economy.** Massachusetts needs to nurture and grow the new "brain" or "innovation" economy and avoid a severe worker shortage. A recent survey by the Massachusetts Technology Collaborative found job vacancy rates between 8% to 10% in key growth sectors of the labor market — scientific, engineering and information technology. While immigrants with specialized skills are filling some job vacancies, other newcomers lack the basic education and English language skills necessary to obtain such jobs.

- **The labor shortage could further drive up business costs, making it even more difficult for young companies to mature here.** A greater range of jobs is found in more mature companies. Massachusetts needs to retain young companies as they grow in order to spread the benefits of the new economy more equitably.

- **Massachusetts is not preparing workers for jobs in the new regional economy.** Many states are taking the competition for high-skilled workers very seriously, investing in a coordinated approach to worker training and education at every level. Massachusetts lacks a coordinated approach to address the skills mismatch between workers and available jobs, and many school systems in Massachusetts are under-performing. Massachusetts contains almost one million adult workers functioning at a fifth grade educational level or below who need access to adult basic education or literacy training.

- **Low-skilled residents are not proportionately benefiting from Boston's booming economy.** In 1990, only 39% of the jobs in Boston were held by Boston residents — with only 20% of the higher-paying downtown jobs held by residents (although 68% of Boston residents worked in Boston as of the 1990 U.S. Census). Because Boston's job growth is expected to occur in fields with high educational requirements, the percentage of jobs in Boston held by residents may decline further. This points to the critical importance of improving Boston's public education system. Maintaining a diverse array of jobs that includes manufacturing, wholesale trade, construction, and other traditionally "blue-collar" jobs will also expand the opportunities available to Bostonians.

- **High costs of land, labor, and utilities are barriers to manufacturing firms wanting to locate in Boston.** This is especially true for new businesses or firms requiring a significant amount of land or space.

- **Boston's healthy growth in wages has been partly responsible for driving up housing costs, now adversely affecting low-income residents, especially renters.** Many households have been forced to double up or move out of the city and are unable to meet other financial obligations or save money. Due in part to the high cost of housing, a single parent with a school aged child needs to earn $12.52 per hour ($26,042 per year) in order to live in Boston without financial assistance — an hourly wage well beyond the current minimum wage.

- **Workers moving from welfare to work under the state's new welfare reform legislation need jobs that pay enough to support a family yet do not require a college education.** Yet, as noted earlier, it is precisely these jobs that are becoming more and more scarce in Boston.

- **Eliminating barriers to employment faced by many residents — such as a lack of quality childcare, adequate transportation to jobs in the suburbs and job training — remains a challenge for Boston, as it is for all cities.** Preparing the workforce for the kinds of jobs available now and in the future is essential to ensuring that each of Boston's residents is able to participate in the region's booming economy.

- **Reductions in federal funding of institutions involved in research and development and health care could slow local and regional growth.** To grow the economy, both the public and private sectors must invest in research. According to the Massachusetts Technology Collaborative, Massachusetts ranks 37th among the 50 states in terms of state "own source" funding for research.

No city can successfully address these challenges alone. They require region wide strategies and public policy support from the state and federal governments.

The Economy at a Glance

Boston is the center of the New England economy

With only 10% of the state's population, Boston provides:

- 17% of the state's employment;
- 18% of the state's tax revenues; and
- 22% of the state's gross product of goods and services.

One in six jobs — over 113,000 in all — have been created in Boston since the end of the last recession in 1992. Boston currently has 689,000 jobs.

Unemployment

In 1999 Boston's unemployment rate was 3.3%, an all-time low for the city.

Industry Diversity

Over the past 30 years, Boston's economy has shifted from manufacturing and industrial based to one rich in finance, professional services, education, and health care.

Commercial markets

Boston's downtown office vacancy rate was 3.7% at the end of 1999, second lowest in the country. The Class A vacancy rate was less than 1.5%, the lowest of any major U.S. city.

New developments are underway in Boston's Financial District, Back Bay, the Waterfront, and in other areas.

Economy Indicators

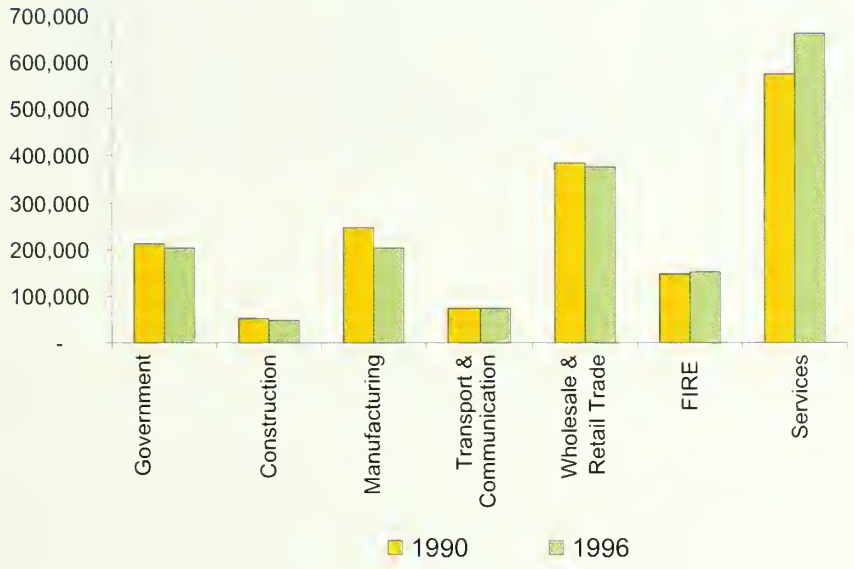
3.1 Strong, Diverse Economy

A sustainable economy begins with jobs. A region, and the cities within it, should be rich in industries that will continue to grow and provide employment opportunities across a wide range of occupations and skill levels. Regions and cities, without growing and diverse industries, will have trouble sustaining their economy over the long haul, become stratified, and decline over time.

Employment in Metro-Boston by industry sector

PROFESSIONAL AND FINANCIAL SERVICES COMPRISE OVER 45% OF THE 1.7 MILLION JOBS IN METRO-BOSTON.

Metro-Boston employment by industry sector, 1990 and 1996



Source: Massachusetts Division of Employment and Training

What does this mean?

Growth in the number of jobs in Boston reflects the overall strength of the regional economy. The number of jobs increases as the economy picks up and firms begin to hire additional employees. Recessionary periods, on the other hand, are characterized by declining job counts. A wide range of industries provides jobs at many different skill levels and cushions the economy from the repercussions of a decline in a specific industry.

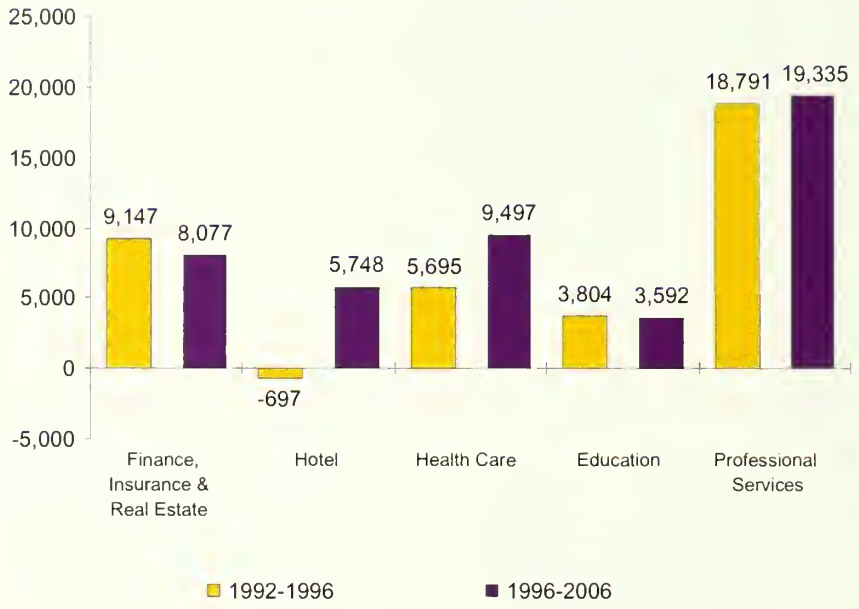
Four key industries comprise the foundation of the Metro-Boston economy — high technology, health services, financial services and higher education. One out of every four workers in the Boston area is employed in these sectors of the economy. A similar number of jobs are provided by secondary industries (such as legal, accounting, transportation, printing, and business services) that are supported by the four economic engines.

These leading industries help fuel economic expansion by bringing outside dollars into the region through export of goods and services and through research grants. Consequently, the economic health of the region, according to the Greater Boston Chamber of Commerce, is intrinsically tied to the success of these four industries.

Employment growth in Boston by industry sector

THE STRONG ECONOMY ADDED OVER 113,000 JOBS IN BOSTON IN A WIDE RANGE OF INDUSTRIES BETWEEN 1992 AND 1999.

Job growth in Boston, 1992–1996 vs. projected growth 1996–2006 for selected industries



Source: Boston Redevelopment Authority

What does this mean?

Boston has undergone a period of strong growth since the end of the last recession in 1992. With 689,323 jobs, Boston has surpassed the previous record number of jobs reached in 1988. Although the job market has recovered from its low in 1992, industry distribution has changed. Most of the new growth has been in white-collar industries such as professional services, health care and securities that require a college eduction. These industries are expected to have a strong nationwide customer base and are expected to experience robust growth well into the future.

3.2 Low Unemployment

A sustainable economy is one in which jobs are available to everyone who wants one, not just in times of economic well-being but on a steady basis. Besides being an excellent indicator of the overall strength of the economy, the unemployment rate is also a good indicator of how well, or how poorly, the jobs in the region or city match the skills of the available workforce.

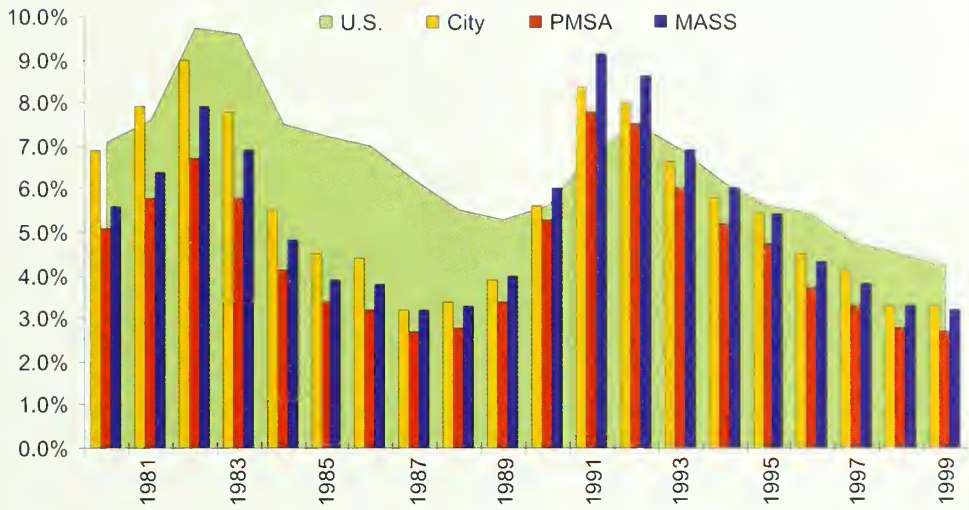
Unemployment rate in Metro-Boston

METRO-BOSTON'S UNEMPLOYMENT RATE WAS 2.7% IN 1999, A RECORD LOW.

Unemployment rate in Boston

BOSTON'S UNEMPLOYMENT RATE WAS 3.3% IN 1999—A RECORD LOW.

Unemployment rates in Boston and in Metro-Boston, 1980–1999



Source: Massachusetts Division of Employment and Training and Bureau of Labor Statistics

What does this mean?

The metropolitan economy has made dramatic gains. The regional workforce has grown by 4.68% to 1,649,083 since it reached a low for the decade in 1992. The Metro-Boston region contained 1,790,978 jobs in 1998, an increase of over 13% since 1992. However, unemployment rates and average wages vary across the region's cities and towns and across racial and ethnic groups. Thirty-six of the 101 communities in Metro-Boston have unemployment rates higher than the regional rate; a few have unemployment rates higher than the national rate.

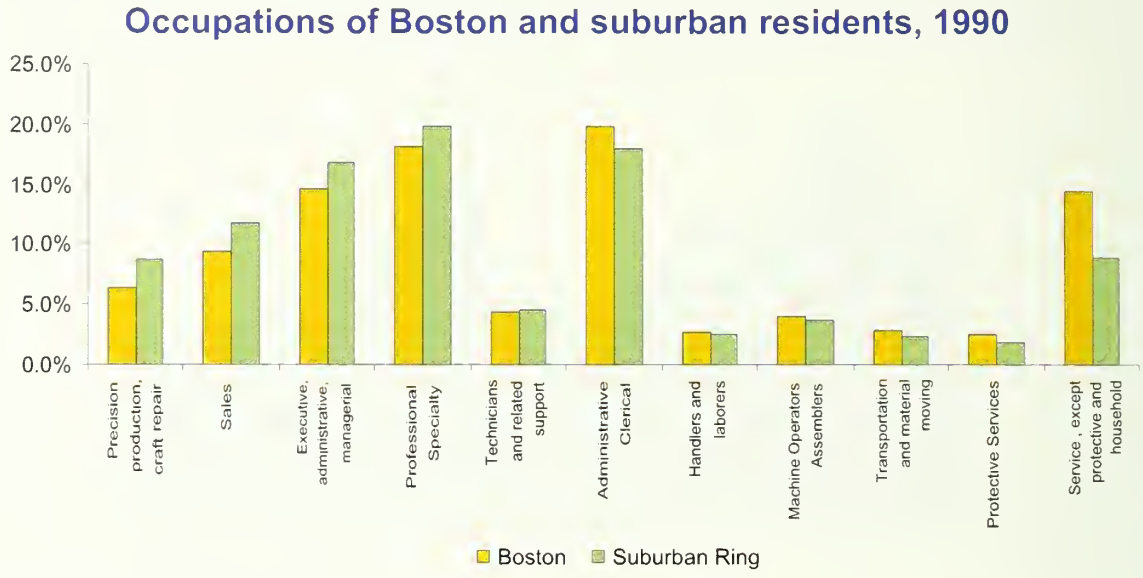
Boston's recent hot economy has produced a record number of jobs in a wide range of industries and occupations. As a result, the unemployment rate dropped to a record low 3.3% in 1999, down 5.1 points from the high of 8.4% recorded in 1991. Nine years of job creation has brought the city's unemployment rate below the state average for the first time since 1994. In 1999, there were 286,126 Boston workers with jobs and fewer than 10,000 unemployed. However, employment rates and average wages vary greatly across the city's neighborhoods and across racial and ethnic groups.

3.3 Opportunity for All Residents

A sustainable city should have neither an over-concentration of low-skilled service workers nor be a haven for highly skilled professionals only. A sustainable city includes workers of all occupations and incomes, and Boston residents should be able to find a job in Boston that allows them to have a decent standard of living. To determine whether Boston residents are participating in the job growth sectors in the region, the occupations of Boston residents can be compared to the occupations of suburban commuters who work in Boston.

Occupations of Boston and suburban residents

COMMUTERS, WHO OFTEN HAVE ADVANCED SKILLS AND EDUCATION, HOLD OVER 60% OF THE JOBS BEING CREATED IN BOSTON.



Source: U.S. Census, 1990

What does this mean?

Boston is one of the few U.S. cities that has more jobs than people. As of 1990, Boston residents held 39% of all the jobs in Boston and 68% of Boston's working residents worked in Boston. Because job growth is outpacing population growth, it is likely that the percentage of jobs held by Boston residents is now less than 39%. Increasing educational attainment rates suggest that more Boston residents are able to find jobs in the city, but this may also be an indicator of gentrification.

Suburban residents are more likely to be employed in managerial, technical, executive, or other high-skill, high-pay occupations than are Boston residents. Boston has a higher-than-average concentration of high-skill jobs due to the strength of professional and financial services firms downtown, and the wealth of medical and educational institutions in the city. The 2000 Census will provide important new data in this area.

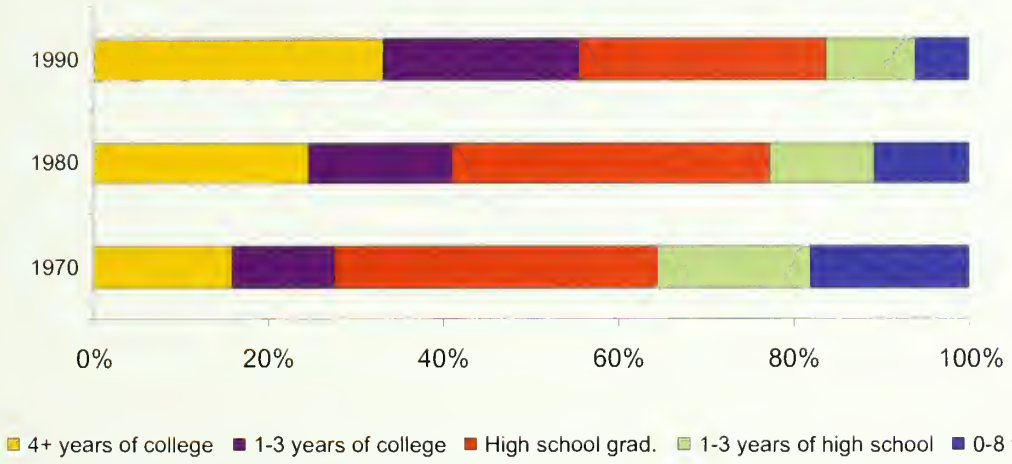
3.4 Adequately Prepared Workforce

No single indicator predicts the professional success of an individual better than educational attainment. More jobs in Boston and Metro-Boston require a college degree than ever before. It is estimated that about half of the new jobs created in Boston over the next 10 years will require a college degree. Companies also look at the educational attainment level of the workforce when considering where to locate their businesses. Regions and cities with an educated and skilled workforce will be more attractive to companies and will attract more and better jobs.

Educational attainment in the Metro-Boston region

ONE THIRD OF THE METRO-BOSTON REGION'S RESIDENTS HAVE EARNED A COLLEGE DEGREE.

Educational attainment in Metro-Boston, 1970–1990



Source: U.S. Census, 1970, 1980, and 1990 and the Metropolitan Area Planning Council, Metropolitan Data Center

What does this mean?

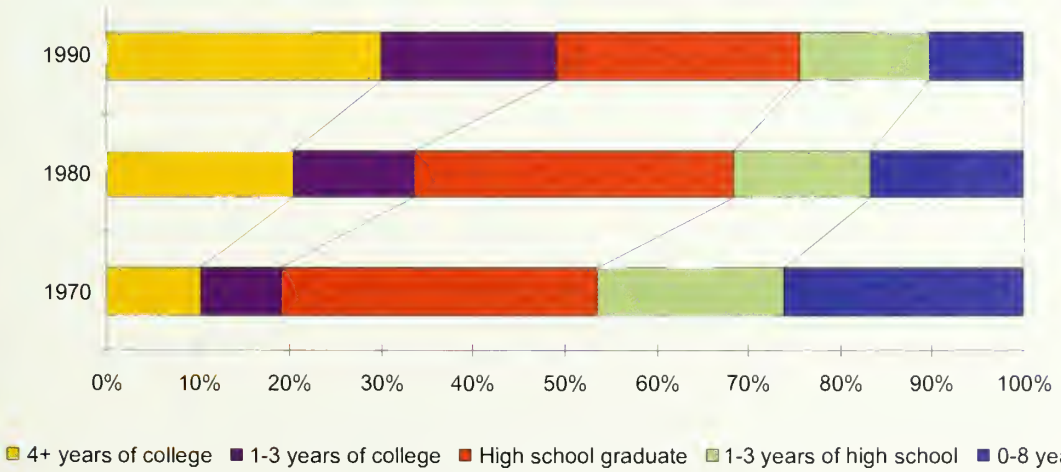
The educational attainment of the Metro-Boston labor force outpaces the national statistics as the proportion of adults with a college degree or some college education has continued to increase. Only one adult in six now has less than a high school education.

A 1998, Massachusetts Institute for a New Commonwealth (MassINC.) study compares Metro-Boston area workers with the 200 largest metropolitan areas in the nation. The study reveals that 50.8% of Metro-Boston area workers hold a Bachelor's Degree or higher, compared to 31.4% in the 200 largest metropolitan areas in the country. Additionally, the study showed that in the mid-1990s, fewer than 5% of the year-round, full-time workers in the Metro-Boston area lacked a high school diploma. Still, the difficulty in filling positions for highly skilled labor, particularly in the software industry, may stifle future economic expansion in Metro-Boston.

Educational attainment in Boston

30% OF BOSTON RESIDENTS HAVE EARNED A COLLEGE DEGREE. 70% LACK THIS KEY TO THE NEW ECONOMY.

Educational attainment rates in Boston, 1970–1990



Source: U.S. Census, 1970, 1980, and 1990

What does this mean?

Boston is among the nation's leaders in the percentage of residents with a college degree. In 1990, 30% of Boston residents had completed college, up from 20.3% in 1980 and 10.3% in 1970. Nearly 70% have completed at least one year of college. San Francisco and Washington, D.C. are the only major U.S. cities with a greater percentage of college graduates.

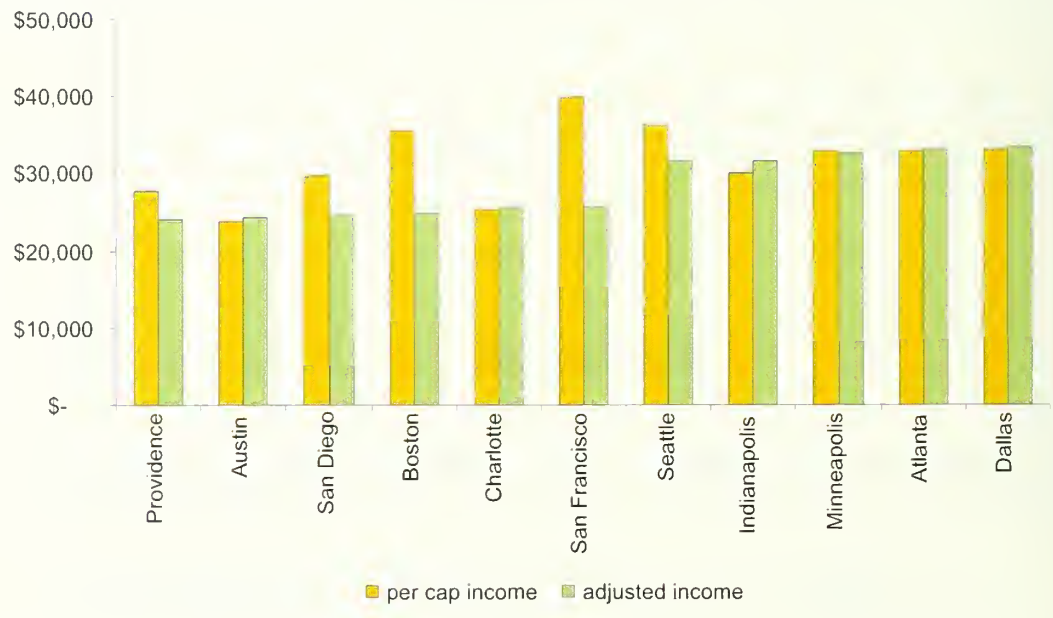
The percentage of Bostonians without a high school diploma is dropping as well, from 46.5% in 1970 to 24.3% in 1990. The 2000 Census will provide data necessary to understand whether this change reflects a new influx of residents with college degrees or the educational advancement of current residents.

3.5 Affordable Cost of Living

People who work in a city should be able to afford to live there, too. Cities with extremely high costs of living experience the "Aspen Effect," whereby businesses have difficulty attracting workers at all skill levels, and particularly filling entry-level jobs because of a lack of affordable housing for these potential jobholders. Besides impacting the economy, a high cost of living can also lead to overcrowding and homelessness, discourage saving, and impair the health of low-income households.

Mean household income adjusted for cost of living in Metro-Boston

THE HIGH COST OF LIVING IN THE METRO-BOSTON AREA OFFSETS THE HIGHER-THAN-AVERAGE WAGES.



Source: Metropolitan Area Planning Council

What does this mean?

High housing and utility costs force Bostonians to spend a large percentage of their income on basic necessities such as shelter, food, clothing and utilities. This leaves less money available for improving

the quality of life, saving for a home, or continuing schooling. A paucity of disposable income can also encourage credit card and other debt, compounding financial difficulties for many.

Even though Metro-Boston's average household income is among the nation's highest, this advantage is almost neutralized when measured against the cost of living in the region. A study by MassINC linked Metro-Boston's rising cost of living, especially housing costs, to the slow growth of the region's workforce. Discouraged by the rise in housing prices, graduates of the area's colleges and universities are now less likely than in the past to remain in the Boston area after graduation. The loss of these graduates amounts to the loss of the talent and high-tech innovation that has fueled much of the region's growth in the past, although this trend may now be reversing. At the same time, the city's generally high cost of living and high housing costs are putting extreme economic pressure on the city's low wage workers.

3.6 Family Self Sufficiency

A self-sufficiency standard measures the costs of living, working, raising a family, and paying taxes — without any public or private subsidies — based on the actual cost of goods in the marketplace. It varies by geographic area and by family size and composition. The high cost of living in Boston is forcing many to analyze what it actually costs to raise a family in Boston. A 1999 study by the Women's Industrial and Education Union has brought this debate into sharp focus as illustrated below.

Family self-sufficiency in Boston

TWO-THIRDS OF BOSTON HOUSEHOLDS EARN ENOUGH TO BE SELF-SUFFICIENT; ONE-THIRD HAVE INCOMES WHICH DO NOT FULLY COVER LIVING COSTS.

Family self-sufficiency among Boston households, 1997

Monthly costs	One adult	Adult and preschooler	Two adults	Two adults, preschooler, and school-age
Housing	669	839	669	839
Child care	0	669	0	985
Food	157	238	309	488
Transportation	46	46	92	92
Health care	89	163	195	235
Miscellaneous	96	196	127	264
Taxes	267	578	288	724
Earned Income Tax Credit	0	0	0	0
Child Care Tax Credit	0	(40)	0	(80)
Monthly Self Sufficiency Wage	$1,324	$2,690	$1,680	$3,547
=hourly wage per adult	$7.52	$15.28	$4.77	$10.08
=annual wage per household	$15,888	$32,280	$20,160	$42,560

Source: Women's Education and Industrial Union (WEIU), 1999

What does this mean?

The "Self-Sufficiency Standard" developed by the Women's Education and Industrial Union (WEIU), includes the actual costs of housing, food, child care, health care, transportation, miscellaneous items, and taxes. It makes no allowance for saving for retirement, for children's education, or for emergency expenses. The 1997 Self-Sufficiency Standard for a single adult in Boston was $1,324 per month; for two adults $1,680 per month; for a single parent with two children $3,263 per month; and for two parents with two children $3,547 per month. The 1997 Composite Standard, a weighted average of the four standards by their proportion of households in the city, was $24,588 per year for Boston.

WEIU data suggest that two-thirds of Boston's households have incomes above the Self-Sufficiency Standard. However, the picture is not so bright for 34% of Boston's households, who are challenged to get by on an income below the Self-Sufficiency Standard. Families are working hard, but are still finding it difficult to make ends meet. Nearly twice the percentage of households that fall below the official federal poverty standard have incomes below the Self-Sufficiency standard. This indicates a poverty rate which is much higher than the official federal poverty rate, which is not adjusted for regional cost-of-living disparities.

3.7 Low Poverty Rates

A sustainable economy should provide enough jobs that pay wages high enough to keep people out of poverty. Wage increases resulting from economic expansion should not be limited to those in the upper income brackets but should translate into higher pay for the working poor. Changes in the poverty rate not only indicate the overall strength of a region's economy but show the economy's impact on historically lower-income municipalities, neighborhoods or residents. Expanding economic and employment opportunities in these areas and training residents for available jobs can help everyone participate in the booming economy.

The poverty rate tends to underestimate economic disadvantage because it does not account for new needs (e.g. child care), for variable costs-of-living by geographic location, and does not distinguish between families in which adults are employed versus those in which adults are not employed.

Poverty rates in the Metro-Boston region

IN 1990 THE POVERTY RATE IN THE METRO-BOSTON REGION WAS 8.08% — LOWER THAN THE STATE OR NATIONAL RATES. THE STATE POVERTY RATE INCREASED FROM 10.1% IN 1996 TO 12.2 % IN 1997, DESPITE GROWING PROSPERITY OVERALL.

The poverty rate in Boston

THE 1990 POVERTY RATE OF 18.7% IN BOSTON INCREASED BY 1.3% DURING THE LAST RECESSION IN 1993.

What does this mean?

According to the 1990 Census, the poverty rate in the Metro-Boston area in 1990 was 8.08%, compared to 10.15% in the state and 14.10% in the nation. The poverty rate in Boston decreased from 20.2% in 1980 to 18.7% in 1990. Boston was one of only 11 of the 50 largest U.S. cities to experience a decline in the poverty rate during the 1980s. No new poverty data for the city itself are available, but a 1993 survey indicated that the poverty rate for Suffolk County had increased by 1.3% between 1990

and 1993. The state poverty rate increased from 10.1% in 1996 to 12.2% in 1997. Given the growing prosperity of the state's, the region's, and the city's economy as a whole during that period, an increase in the poverty rate indicates that the benefits of region's and the city's economic boom are not being distributed equitably.

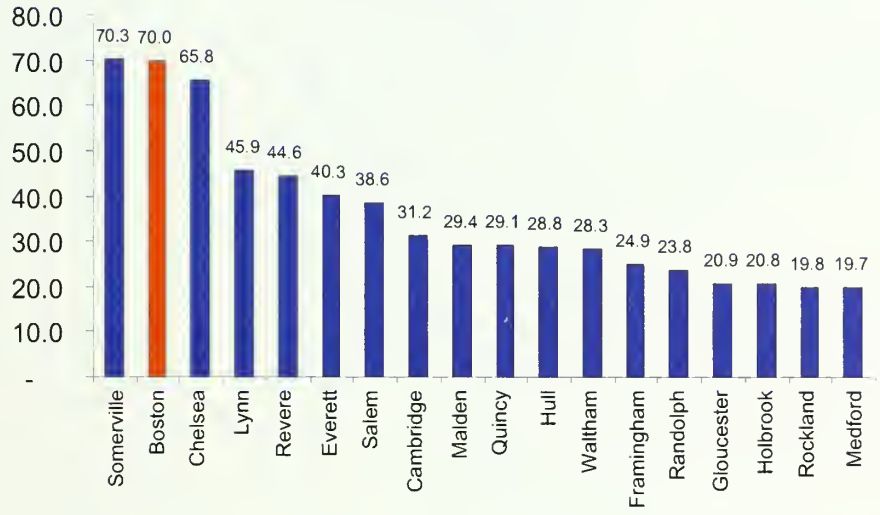
Number of children participating in free lunch program in Metro-Boston

IN 1999, 20 % OF ALL CHILDREN AND NEARLY 20% OF THE MUNICIPALITIES IN METRO-BOSTON, PARTICIPATED IN THE FREE/REDUCED PRICE LUNCH PROGRAM.

Number of children participating in free school lunch program in Boston

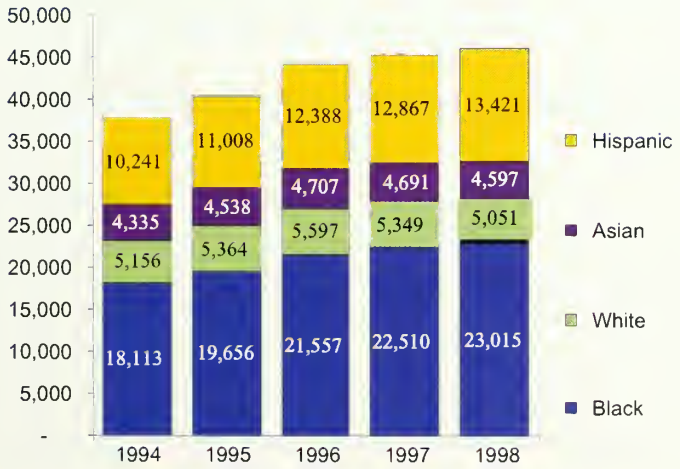
MORE MINORITIES AND FEWER WHITE STUDENTS ARE PARTICIPATING IN THE FREE/REDUCED PRICE SCHOOL LUNCH PROGRAM IN BOSTON'S PUBLIC SCHOOLS.

Percent of students receiving free/reduced priced lunch in Metro-Boston communities, 1990



Source: Massachusetts Department of Education and U.S. Census, 1990

Number of Boston Public School students receiving free/reduced priced lunch, 1994–1998



Note: Overall, the percent of the city's school-age children enrolled in Boston's public schools has increased, from 63.9% in 1994 to 74.3% in 1998. While the standard for enrollment in the free or subsidized school lunch program changes from year to year and may not measure poverty status with complete accuracy, it remains a useful barometer of the poverty status of the city's children.

Source: Boston Public Schools

What does this mean?

Measuring the number of free/reduced-price school lunches is a commonly used indicator of the number of children living in poverty. While the poverty rate in the region is relatively low overall, this measure indicates that several communities in the region have experienced increased poverty status for children and, by extension, their families.

However, this growth has not been uniform across racial lines. For example, between 1994 and 1998, the number of blacks and Latinos receiving subsidized lunches grew by 4,902 and 3,180 respectively. Conversely, the number of whites participating in the program declined slightly, although this decline appears to be linked to a decline of 1,345 in the number of white students enrolled in Boston's public schools over the same period. Although unemployment is low and incomes are generally increasing, the rise in the number of subsidized lunches indicates great economic disparities across races.

3.8 Successful Neighborhood Economies

Successful neighborhood economies are a function of intense economic activity that revolves around the day-to-day lives of neighborhood inhabitants. Many businesses, when deciding whether or not to locate in a certain neighborhood, analyze only the per capita incomes of neighborhood residents. As a result, neighborhoods with low per capita incomes have often lacked businesses that provide everyday goods and services, such as grocery stores and pharmacies. This is changing due to Boston's very successful Main Streets Program — working to revitalize and market Boston's neighborhood business districts — which is now operating in 19 neighborhood business districts, and because of new ways of analyzing the buying power and competitive advantage of communities.

Purchasing power of neighborhoods

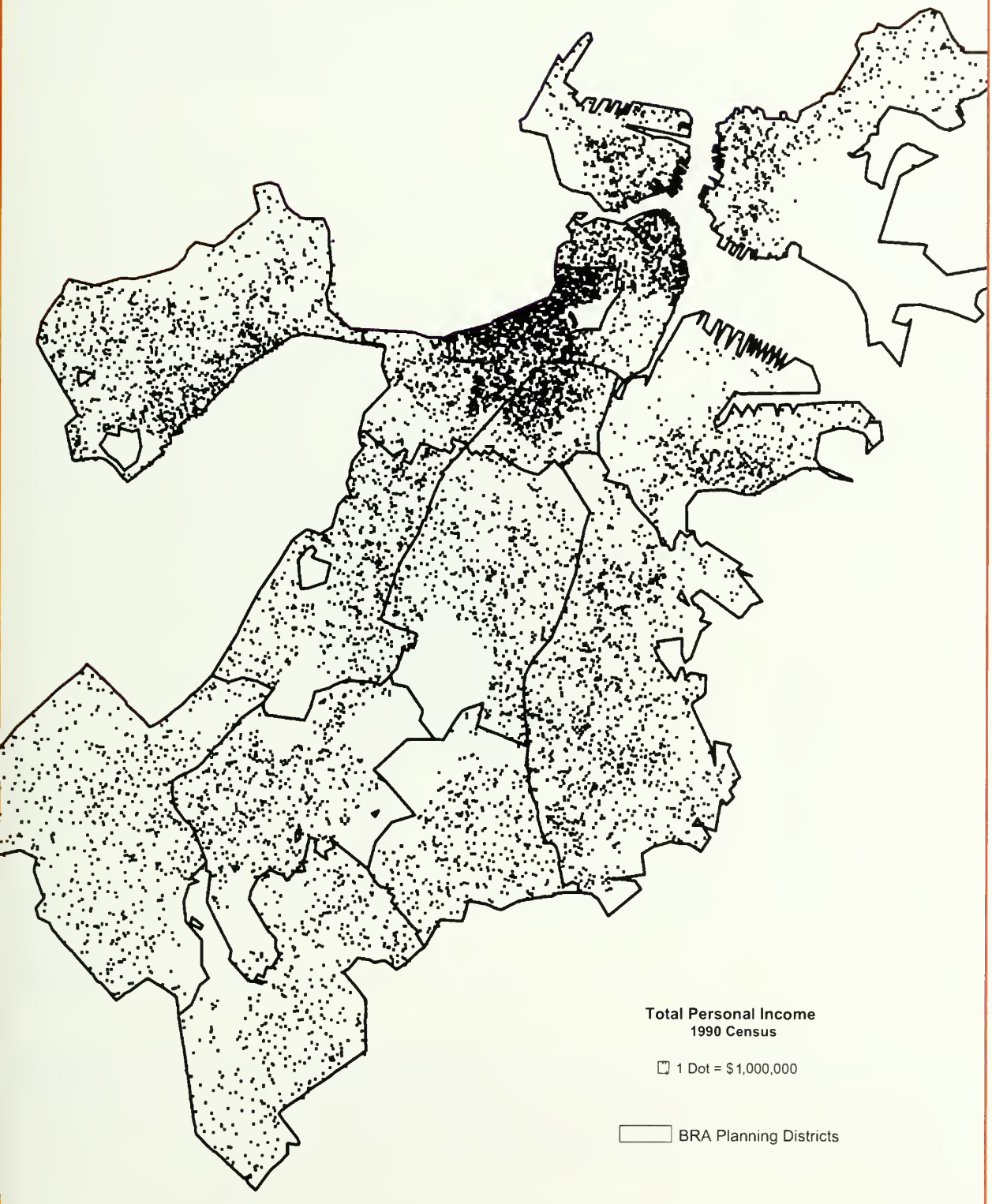
BOSTON'S LOW-INCOME NEIGHBORHOODS AND RESIDENTS HAVE MILLIONS OF DOLLARS IN PURCHASING POWER.

What does this mean?

New economic analyses measure total purchasing power instead of the median or per capita income figures of a neighborhood to inform business location decisions. Through this lens, some of Boston's poorer, high-density neighborhoods indicate greater purchasing power in comparison with low density, higher-income neighborhoods. This comparison also holds true when comparing Boston's neighborhoods to wealthy, low-density suburbs. An awareness of this collective buying power encourages local investment, which, combined with the enhancement of Boston's neighborhood business districts, creates conditions for local wealth to circulate within the community.

See map on Purchasing Power of Neighborhoods on facing page

Purchasing Power of Neighborhoods



Prepared by:
Alan Saiz, College of Criminal Justice

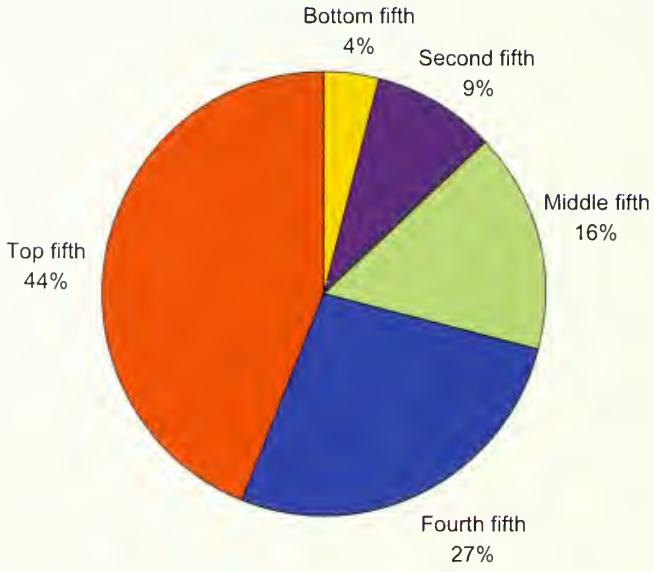
3.9 Economic Equity for All Bostonians

For an economy to be sustainable, it must be inclusive. Everyone, regardless of race, gender, religion, or ethnicity, deserves an opportunity to participate in the economy and to reap the benefits of the prosperity the city is experiencing. The following three measures show how certain groups are faring in the city. While Boston's economy is booming, it is clear, from closer examination of some of the indicators such as unemployment and income, that not everyone is sharing in the success of the new economy.

Income gap expressed through the GINI Index

THE INCOME GAP IN BOSTON HAS INCREASED IN EACH OF THE LAST TWO CENSUSES.

Distribution of family income in Boston, 1990



Source: US Census, 1990

What does this mean?

The GINI Index is a tool commonly used to measure the income inequality of a population. In a economically homogenous population, the bottom 20% would earn 20% of the total income, as would the top 20%. The GINI Index measures deviation from this utopian scenario. An Index of 0 represents a population in which everyone earns the same amount, and an Index of 1 represents a theoretical situation in which one person earns 100% of the total income.

The pie chart above shows the distribution of total family income that is earned by families in Boston. It is clear that the top 20% of the families earn a much larger proportion of the total income than one would expect, while the bottom fifth earn far less. In fact the percentage of the total family income earned by the bottom 40% of the population declined, while the top 40% of money earners increased their share of the total income between 1970 and 1990.

It is useful to examine the GINI Index over time. From 1970 to 1990, the GINI Index rose from 0.370 up to 0.423, indicating that more wealth was concentrated among fewer people and that income inequality was increasing.

Year	GINI Index
1970 income	0.370
1980 income	0.407
1990 income	0.423

Source: U.S. Bureau of the Census (1970, 1980, 1990)

Total income earned, 1970–1990

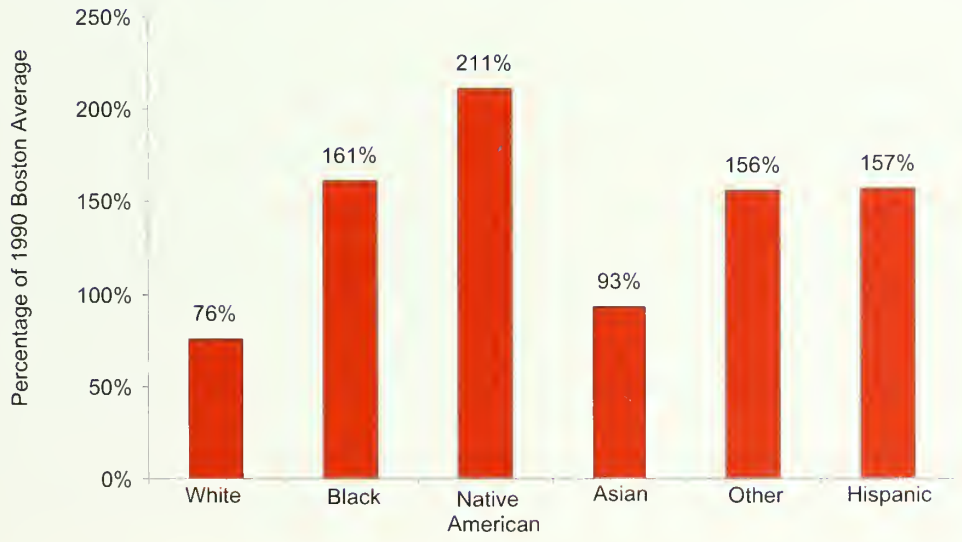
	1970	1980	1990
Bottom 40% income earners	17.7%	13.3%	12.7%
Median income earners	23.6%	21.7%	20.2%
Top 40% income earners	65.9%	65.7%	70.9%

Source: U.S. Bureau of the Census (1970, 1980, 1990)

Unemployment rate by race in Boston

IN BOSTON UNEMPLOYMENT RATES VARY SIGNIFICANTLY BY RACE.

Boston's unemployment rate by race as a percentage of city average, 1990



Source: U.S. Census, 1990

What does this mean?

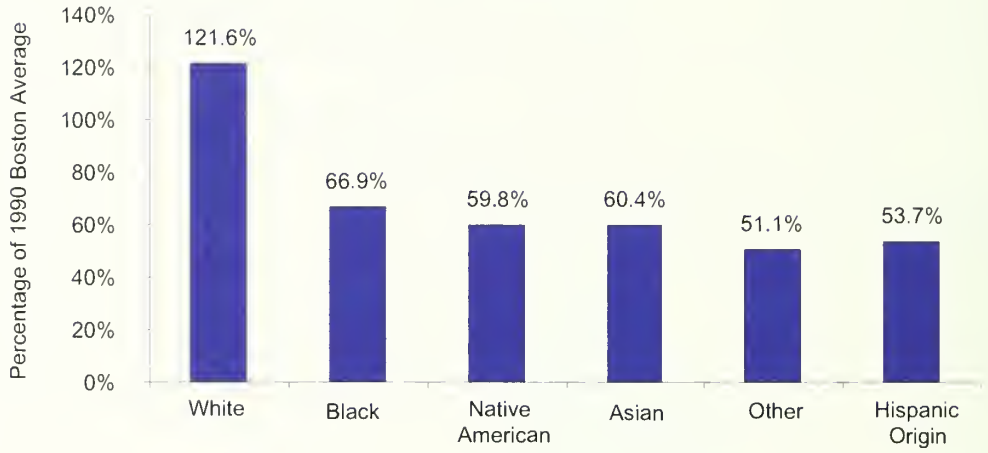
In 1990 whites had an unemployment rate that was 24% lower than the citywide average of 8.3%. The unemployment rate of Asians was slightly below the citywide average. Blacks, Native Americans, and Latinos had unemployment rates at least one and a half times the citywide average. Ameliorating the differences in unemployment rates across racial lines remains a challenge in Boston. In 1990, the national recession made finding work difficult for many Bostonians. However, the weak job market especially affected people of color. Given the current economic situation, the unemployment rates are almost certainly lower for all races. However, differences in the unemployment rate by race are likely to persist.

Differences in unemployment rates by race suggest that people of color are not getting the education, skills training and job networking skills they need for economic advancement. Rate differences also suggest the presence of other factors including discrimination, language barriers, and lack of access to child care and transportation.

Per capita income by race in Boston

RACIAL MINORITIES HAVE A LOWER MEDIAN INCOME THAN WHITES.

Per capita income by race, 1990



Source: U.S. Census, 1990

What does this mean?

The per capita income in Boston varies greatly across racial lines. In 1990, the per capita income of whites was 121.6% of the citywide average. However, the per capita incomes of racial minorities in Boston were all well below the citywide average. Among minority groups, blacks and Asians had the highest per capita incomes, at 66.9% and 60.4% respectively. People of Hispanic origin had per capita incomes that were 53.7% of the citywide average. Differences in per capita income suggest that for people of color in Boston, the barriers to improving income are similar to those causing disproportionately higher unemployment rates. Although per capita income is increasing, disparities are likely to persist, because of historical inequities in issues such as educational attainment. Efforts underway to reduce racial disparities in school and health outcomes can go a long way towards reducing the income gap.

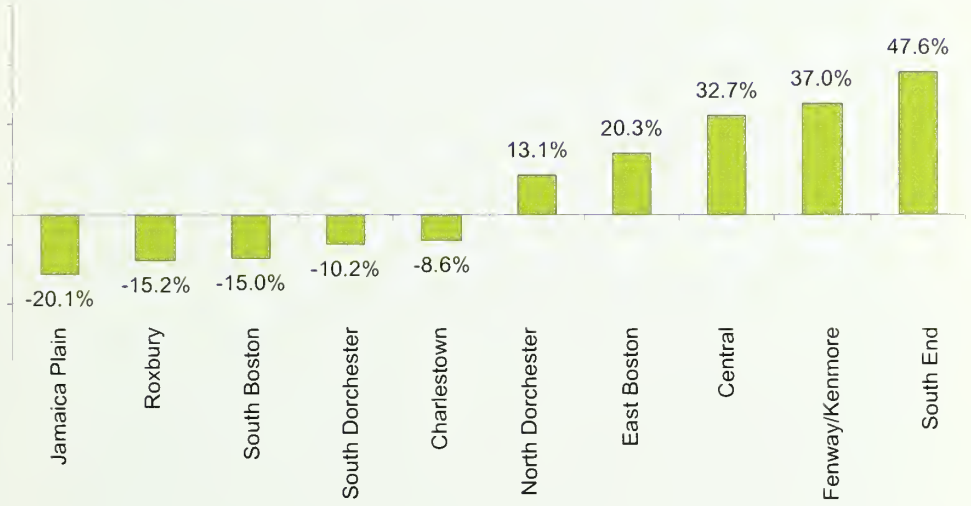
3.10 Economic Equity in Boston's Neighborhoods

A truly sustainable economy provides opportunities for everyone, without regard to where they live. Disparate unemployment and poverty rates across the city's neighborhoods indicate that there are barriers to residents' entering and staying in the job market and earning a sufficient wage. These barriers include inadequate skill levels and education levels, lack of access to child care and transportation, language barriers, lack of an employment network, and health problems.

Family poverty rates by neighborhood

POVERTY RATES IN BOSTON'S POOREST NEIGHBORHOODS ARE DECLINING RELATIVE TO THE CITY AVERAGE.

Change in family poverty rates by neighborhood, 1980–1990



Source: U.S. Census, 1980 and 1990

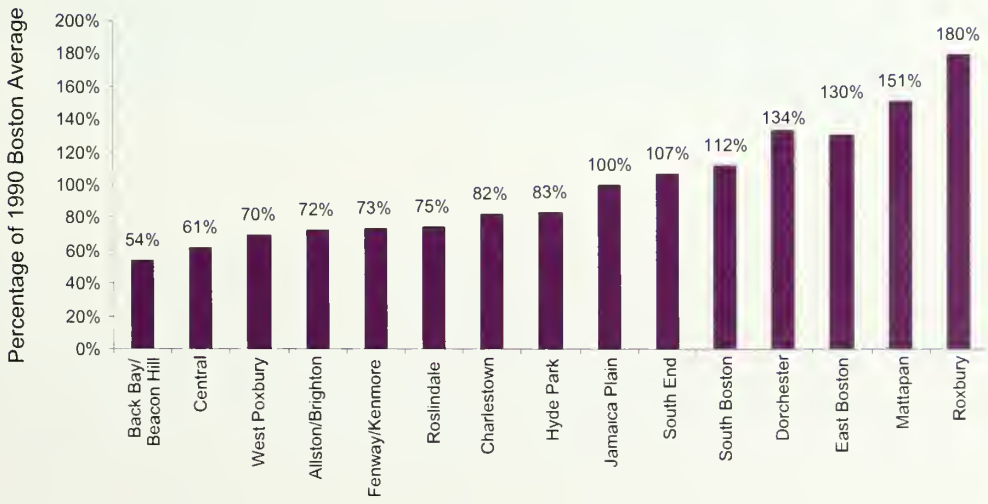
What does this mean?

Boston's neighborhoods with the highest poverty rates among families at the time of the 1980 census showed the largest declines by the 1990 census. In 1980, Roxbury had the highest poverty rate among families at 33.3%. By 1990, this rate had dropped 6.3% to 27.0%. Jamaica Plain, South Boston, and South Dorchester also had substantial declines in poverty rates, while other neighborhoods' rates increased.

Unemployment rate by neighborhood

UNEMPLOYMENT RATES VARY SIGNIFICANTLY BY NEIGHBORHOOD.

Unemployment rate by neighborhood, compared to city average, 1990



Source: U.S. Census, 1990

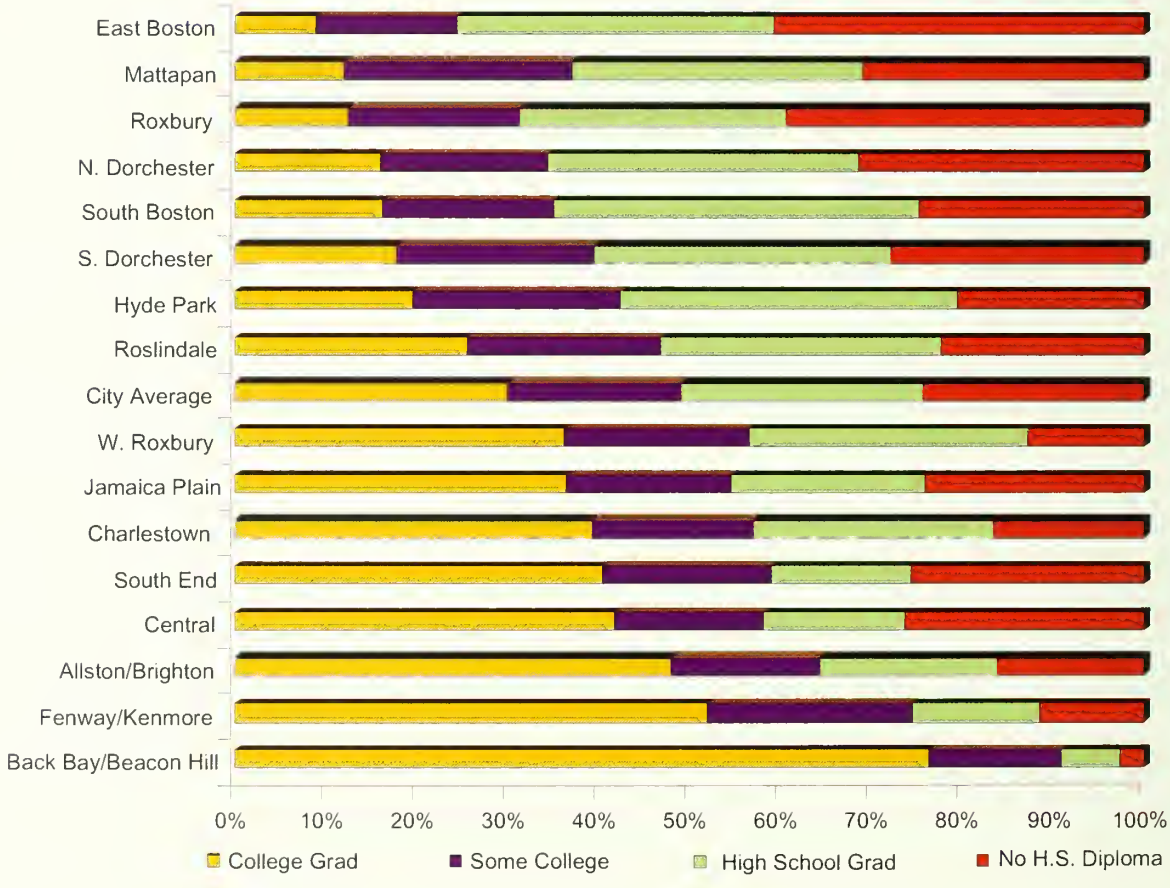
What does this mean?

When the last count of neighborhood unemployment rates was conducted during the 1990 Census, Boston was in the midst of a recession. As a consequence, the citywide unemployment rate was high, at 8.3%. While some neighborhoods were virtually unaffected by the recession, others had unemployment rates in the teens. The neighborhoods with the highest unemployment rates in 1990 were those with racial minority populations and lower-than-average levels of educational attainment.

Educational attainment by Boston neighborhood

EDUCATIONAL ATTAINMENT RATES VARY WIDELY BY NEIGHBORHOOD.

Educational attainment by Boston neighborhood,1990



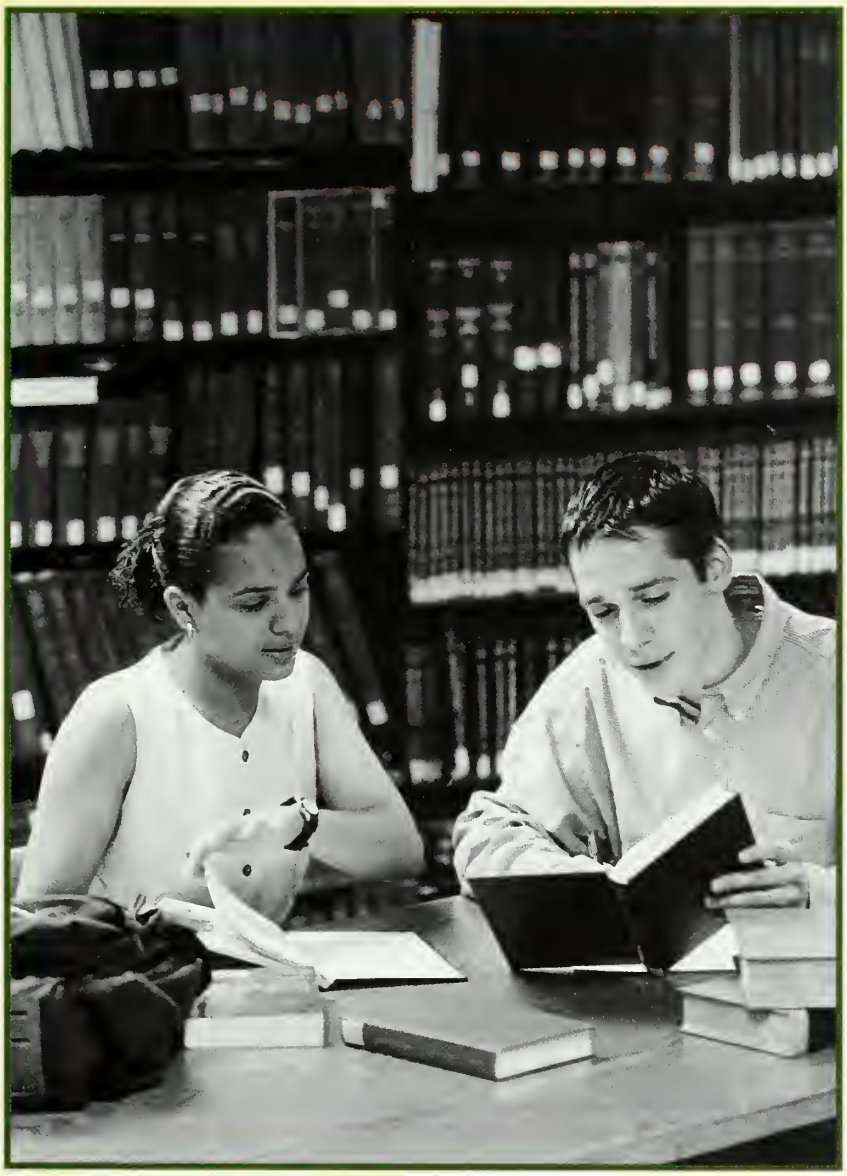
Source: U.S. Census, 1990

What does this mean?

Even though Bostonians overall have a high level of educational attainment, college graduates are not evenly distributed throughout the city. In seven of Boston's neighborhoods there are more people without a high school diploma than people with a college degree. In only two of Boston's 16 neighborhoods do more than half of the residents hold college degrees. In 11 of Boston's neighborhoods, more than one-fifth of the residents age 25 and over do not have a high school diploma, considered the bare minimum to gain employment that can support a family.

SECTION FOUR

Education



Vision

A community where every member has the opportunity to access the tools of learning, to think critically and solve problems, and to develop as an effective member of the community and of society.

Indicators of Educational Excellence	Measures	How Is Boston Doing?
4.1 School Readiness	■ Immunization rates for children ages 24–36 months	■ In 1998, 86% of children were immunized
	■ Percent of early childhood teachers, providers with specialized training	■ 77% of center-based teachers are trained but only 40% of all providers
4.2 Confidence in the Public Eduction system	■ Public opinion of Boston Public Schools	■ Overall satisfaction rating on a scale of 1–10 is about 6 (10 = v. satisfied)
	■ Percentage of school-age children in the Boston Public Schools	■ Of the 83,000 school-age children in Boston 76% attend public schools
4.3 High Academic Achievement	■ Percentage of third graders reading at 3rd grade level	■ About 40% of 3rd graders are reading at proficient levels
	■ Test scores of Boston Public School students by race and grade level	■ Test scores show black and Latino students falling behind. Scores drop from elementary to high school
4.4 Parental and Community Involvement	■ Percent of parent attending middle school open houses	■ Data not available at this time
	■ Scholarship support from higher education community partnerships	■ From 1986–1996, BPS students received $110 million in support
4.5 Quality Teaching	■ Ratio of students to teachers in regular education program at elementary school level	■ Elementary schools have 18 students per teacher, compared to the national average of 22
	■ Percent teachers with advanced degrees	■ Almost 78% teachers have advanced degrees
4.6 Quality School Culture and Environment	■ Percentage of high schools with libraries/gyms/labs/renovated school yards	■ All BPS high schools are accredited, indicates all necessary teaching tools
	■ Ratio of racial/ethnic diversity of teachers to student body, by level	■ Teachers and faculty do not mirror ethnic diversity of the student body
	■ Attendance, promotion and drop out rates by level	■ Attendance levels are lowest for high school, promotions drop, and drop-outs increase at middle school level
4.7 Out-of -School and Lifelong Learning Opportunities	■ Number of children served by after-school programs vs. children ages 5–13, by neighborhood	■ Demand for after-school programs exceeds available slots
	■ Adult education and ESL slots vs. length of time on waiting list	■ ESL wait lists range from 6 months to 3 years in Boston
	■ Number of library books per capita vs. books in circulation, by neighborhood	■ Boston libraries have 3.87 books/capita. Circulation rates increased
4.8 Higher Education Opportunities	■ Percent of Boston Public School students who go to college or training	■ 68% of class of 1997 were enrolled in college or vocational training
	■ Adult educational attainment rates by neighborhood	■ Neighborhoods with greatest number of children have the lowest adult educational attainment rates

Education in Boston

Historical Context

For Boston's school-aged children, public education offers the primary gateway to good jobs and a high quality of life in the Information Age. For decades, however, that gateway has been blocked by the poor performance of the system itself.

Boston has a proud heritage in the field of education. Boston Latin School is the oldest in the nation, founded in 1635. English High, founded in 1821, was the nation's first public high school. The Abiel Smith School, constructed in 1834 and dedicated in 1835, was one of the first public schools for African American students. In 1982, the Boston Compact between the Boston Public Schools and Boston's business community, which guaranteed the hiring of qualified public school graduates, was hailed nationwide as a breakthrough public/private partnership. Boston also has more institutions of higher education in and around its borders than any other city in the world.

Despite this heritage and wealth of resources, however, Boston's public schools over the past four decades have been synonymous with what was not working in Boston, such as divisive race relations, weak systems of support and development for youth and a lack of collaboration on behalf of the city's young people on the part of public agencies, organized labor, and community-based organizations. In the mid-1970s, sharp divisions surrounding school desegregation resulted in a politically hostile environment for the schools. Since then, despite islands of innovation and excellence, Boston's public schools — and public school students — have been struggling hard without broad-based success.

The year 1996 marked the beginning of a new phase of initiative for the Boston Public Schools that many hope will finally bring about long-sought improvements. In his State of the City address that year, Mayor Menino linked his political future to the performance of the schools and to the achievements of Boston's school children. In so doing, he was the first mayor in decades to commit his administration to support and improve the school system. That same year, Boston voters reaffirmed their support for giving the mayor a free hand in reforming public education through an appointed school committee, removing a divisive issue from public debate. Thomas Payzant was appointed as Boston's new school superintendent, and that fall, he and the Mayor announced an ambitious five-year plan of reform, "Focus on Children," with higher standards and greater accountability for both teachers and students.

Partly in response to mobilization by parents and advocates, a more progressive, reform-oriented contract was negotiated with the Boston Teachers' Union, allowing for Pilot Schools exempt from rigid requirements. The School Department also strengthened governance and accountability requirements, including School-Site Councils consisting of parents, teachers and administrators at each school. The Mayor also announced goals for new technology — one computer for every four students and every teacher by the year 2001 — and construction of three new extended-day Early Learning Centers for preschoolers, all of which have now been built. The City of Boston is coordinating its plans with the United Way's Success by Six Initiative, the Boston Plan for Excellence, the Boston Private Industry Council and other groups, and has initiated Read Boston, a comprehensive effort to bring all third graders up to the third grade reading level. In 1997, the Boston Public Schools began to offer full-day kindergarten to all five year olds and cut the size of kindergarten through second grade classes. Innovative new pilot and charter schools are challenging conventional practices. As a result, many people hope that Boston is now on the verge of reclaiming its reputation as the "Athens of America."

However, recent contract negotiations and standardized test results underscore the fact that to be successful, Boston's renewed emphasis on public education will require an extended commitment of resources, innovation and collaboration.

Regional context

Increasingly, Massachusetts' prosperity depends on a well educated work force. However according to Massachusetts Institute for a New Commonwealth (MassINC.), a Boston research group, almost one million adults in Massachusetts are functioning with fifth grade skills or below, leaving them in poverty and good jobs unfilled.

In 1993, concern about the condition of Massachusetts' public education system led to the broad-based "Education Reform Act" in response to increasing concern here and nationally about decreasing standards of education. The new law created curriculum frameworks with broad goals in key areas, supported by increased state aid. Since then, state funding for public education has almost doubled. In 1995, the Massachusetts Board of Education interpreted these broad parameters to require standardized tests for both students and teachers, resulting in the Massachusetts Comprehensive Assessment System (MCAS). This system of tests, requiring two weeks, is administered in the 4th, 8th and 10th grades. While the tests are now used diagnostically, by 2003 students in Massachusetts will be required to pass the MCAS in order to graduate from high school.

By and large, results of the MCAS, now in its third year of implementation, correlate with the socioeconomic status of municipal school systems' students and the educational attainment level of their parents, with a very few exceptions. For example, in 1998, 92% and 87% of Weston students passed the English and math tests, while in Springfield, only 52% and 33% passed. Statewide, only 17% of Latino 10th graders passed the math test and only 30% passed the science and technology test. The Mauricio Gaston Institute at the University of Massachusetts/Boston, estimates that more than 80% of Latino students could fail the graduation requirement in 2003. The state's black students, also disproportionately low income, are faring almost as badly.

These results have caused great controversy about whether low-income students have adequate access to the tools needed to test well. Some experts, such as Rudy Crew, former Chancellor of the New York Public Schools, argue that these tools must, in addition to regular classroom learning, include exploration of the arts, effective use of out-of-school time, mentoring and internships to explore the practical value of education, and access to technology and learning networks in many settings. Many of these resources are readily available in high-income school districts while economically disadvantaged districts struggle to create and sustain them.

While most people engaged in the debate about school reform favor high standards and expectations in some form, contention centers on whether the MCAS does or should evaluate critical thinking skills, knowledge on which Western society is built, or the memorization of arcane and, some argue, ethnocentric facts. Another facet of debate is whether the MCAS should be seen as measuring individual student performance or the performance of teachers, schools and school systems — or, whether it simply reflects the socioeconomic status of students and districts tested.

The momentum of the state's new standards and tests is also highlighting teacher performance issues. High rates of failure in standardized tests among teachers in training has put new emphasis on the quality of the state's teacher training institutions.

The recommended teaching model underlying school reform in Massachusetts is designed to move away from lecture-based to project-based modes. On the one hand, students, teachers, and schools are being evaluated on the basis of qualitative measures: what students can do with their knowledge. On the other hand, there is a shift, statewide and nationally, toward the standards-based evaluation of student performance: what students know. These two strands of reform — one underscoring the importance of critical-thinking skills, the other stressing standardized test results — seem to be at odds. They can also send a confusing message to students, parents, and teachers alike. Ideally, they can be made to work together to promote systemic change.

Increasingly, completion of secondary education is not sufficient for success in the new economy. Of more than 1.1 million projected new and replacement jobs in Massachusetts by 2005, half will require one or more years of college. Moreover, a 1997 study, "Closing the Gap," by the think tank MassINC., found that two years of education beyond high school is the educational level required for a skilled job paying a living wage.

The Massachusetts Board of Higher Education estimates that by 2007, the number of high school graduates in Massachusetts will increase from about 62,000 in 2000 to almost 75,000.

The Massachusetts system of higher education includes the University of Massachusetts, with five campuses (45,658 students in 1996), 15 community colleges (38,428 students in 1996), and nine state colleges (30,892 students in 1996). More than 90% of these students are from Massachusetts and more than 75% of graduates live and work in the Commonwealth. State funding provides about 50% of the revenue for public higher education, or 4.3% of the state budget. The national average is 6%.

The state's higher education system serves a variety of students. In general, the state's community colleges, which cost about half as much as the state's public universities, best reflect the increasing diversity of the state's population and of recent high school graduates. For example, the average age of freshmen at the community colleges is 25; minority student enrollment is approximately 20% at community colleges compared to 9% at state four-year colleges.

The region contains a total of 75 colleges and universities serving a total of 253,635 students in 1998. The students these institutions attract from throughout the region, the nation, and the world, add to Greater Boston's store of intellectual capital, to new businesses in cutting edge fields and to the region's skilled work force.

The region's educational resources also include literacy and adult basic education, English as a Second Language (ESL) classes, job training programs, on-the-job training in some of the region's corporations and businesses, continuing education courses, and technical schools. Together, these make up the educational system on which Massachusetts' residents — and the future of Massachusetts' "brain" economy — depend.

The Boston context

About 142,000 children under the age of 18 live in Boston in 2000, a number expected to peak by the year 2005. Of 83,000 school-age children in Boston in 1999, 63,000 attended the 129 Boston Public Schools. The others—about 25%—are enrolled elsewhere: 3,000 in the METCO program, traveling to suburban schools; 1,700 in public charter schools; 900 in private special education schools; and 15,400 in private and parochial schools. Of the children enrolled in the Boston Public Schools, 36% are from families whose primary language is not English and 22% have disabilities and are enrolled in special education programs. Many parents in Boston lack basic education and English language skills, with waiting lists of up to three years for the 1,500 slots in Boston that are funded by the Massachusetts Department of Education.

Of those children in Boston's public schools, 49% are black, 26% are Latino, 15% are white, 9% are Asian and less than 1% are Native American. More than 60% of Boston's teachers and 55% of administrators are white. In addition, Boston has a high rate of non-resident professional staff compared to similar cities.

More than 70% of Boston's public school students are eligible for free or reduced-price school lunches, indicating a high rate of family poverty.

The Boston Public School Department budget, at $575,327,000 for the 1999-2000 school year, represented about 35% of the City of Boston's total operating budget. For fiscal year 2001, the budget increased to $592,954,000, with separate budget items for repair and new construction included in the City's capital budget. While Boston spends an average of $8,398 per student, a fairly high rate among the state's school systems, this amount is offset by the high numbers of bilingual and special needs students

in Boston, which brings the average spent on regular education students to $6,349 — well below that of most suburban school districts.

The new thinking about education in Boston focuses on "whole school change." The primary goal of the five-year reform plan is "to improve teaching and learning to enable all students to achieve a high standard of performance." In 1998, Superintendent Payzant announced a comprehensive plan: system wide reform; the use of student work as a diagnostic and prescriptive tool — with needs identified by data; school-based professional development plans; learning about best practices/resources and aligning them with instruction; involving parents and community in reform efforts; and introducing ways for parents, community residents, and organizations to support students. The plan acknowledged the need for schools to look to and partner with their communities, with the understanding that educational attainment is closely related to early learning opportunities, parents support and safe, and healthy environments.

Many City agencies, community-based and faith-based organizations are also partnering in the learning process, offering school-to-work, after-school, arts and recreational programs, mentors, and tutors. Others are bringing their services into the schools, or working to integrate human service delivery systems with the school system. Businesses and universities are partnering with Boston's public schools. The Annenberg Foundation awarded Boston a major challenge grant to retool teachers' skills in alignment with new models of teaching. To provide out-of-school enrichment opportunities, Mayor Menino created the 2:00 - 6:00 Initiative to increase the number and quality of available after-school programs. More community/school partnerships are anticipated for the future.

Now in its fourth year, Boston's reform plan has resulted in a system-wide reduction in students scoring at the lowest levels on the Stanford 9 test in both reading and math. It has also provided full-day kindergarten for all five-year olds, reduced class size in the first and second grades, upgraded high school curriculum frameworks in all major subject areas and instituted regular school reviews. Fifty school yards are being renovated and landscaped through the Boston Schoolyard Initiative, and all schools are now wired to the Internet—a nationwide first. Twelve innovative pilot schools have opened, including a new citywide visual and performing arts high school.

New goals include: comprehensive literacy and math programs; tougher school attendance and truancy policies; team teaching, professional development and a higher degree of accountability for teachers and principals; support for technology; closing the racial achievement gap; and, expanding alternative programs for students not succeeding in traditional settings.

In addition, groups like Parents United for Child Care, the new Boston Parents Organizing Network, the Boston Plan for Excellence, Critical Friends, the Massachusetts Advocacy Center, the Greater Boston Interfaith Organization and many other groups have redoubled their efforts to improve public education in Boston.

However, despite all of these efforts, in 1999, 55% of Boston Public School 10th graders failed the English language arts portion of the MCAS test, and 73% failed in math, with the highest rates of failure among Latino and black youth. Success for Boston's school children depends not only on the schools but on opportunities well beyond the reach of secondary schools such as early childhood enrichment, adult education for parents, high quality after-school and summer programs, and mentoring.

Neighborhood focus

While Boston does not have neighborhood schools, it is possible to look at student achievement by neighborhood. This analysis, as evidenced in the following pages, underscores disparities in achievement and the importance of responsive, effective strategies to address and reduce these differences.

Based on the 1990 Census, nearly half of Boston's children and youth live in Dorchester, Roxbury and Mattapan. According to a recent report by the City's Office of Community Part-

nerships, in six Boston neighborhoods, 40% or more of all children lived in a single-parent household. In 15 sub-neighborhood areas, between 41%–58% of children were living in poverty. By and large, poverty correlates with lower test scores, higher truancy, and drop-out rates. In Boston, as elsewhere, poverty disproportionately impacts children of color.

Some argue that a return to neighborhood and "walk-to" schools in Boston would increase parental involvement and improve outcomes; others argue that this would result in a return to inequities in the distribution of resources and to racial segregation. Complicating the debate is Boston's high rate of residential segregation overall, especially among whites and blacks, as well as the fact that many of Boston's communities of color, with a high percentage of children in the Boston Public Schools, lack elementary and middle schools within walking distance due largely to school siting and closing decisions made many years ago.

Remaining challenges

For some observers of the Boston Public Schools, reform is not working fast enough to change the life prospects for the systems' many students. Many educational activists, parents, experts, and civic leaders have voiced impatience with the slow rate of change, citing the unwillingness of the system to hold teachers, principals, and administrators more directly accountable for student performance. Parents and students alike worry that children will be held back based on standardized test results without sufficient changes in the system to help them improve. Others cite the need for a still higher level of funding to bring Boston's regular education students up to par with per-student spending in suburban schools. They cite the Boston student body's high rate of poverty and large number of newcomers as additional reasons to increase spending.

There is no greater challenge in Boston overall than that of providing opportunities for Boston's children and students to fulfill their academic potential. Boston's five-year Focus on Children Initiative will end in 2001, with a chance to gauge its success and enlist support for the next step.

Key educational challenges for Boston include:

- **Closing the achievement gap in students of all races, including test scores, admission to Boston's exam schools, promotion rates and entry into and completion of college.** The Massachusetts Advocacy Center estimated that if the Stanford 9 test were given today to 12th graders, more than three quarters of students of color would fail to graduate; The Gaston Institute at UMass/Boston projects even higher rates of failure among Latino youth for the MCAS;

- **Increasing the level of responsiveness, innovation, and commitment on the part of principals, teachers and other staff in under-performing schools** and classrooms and helping all teachers to become proficient in effective teaching methods, and the use of new technologies;

- **Overcoming the many barriers to increased parental involvement in their children's education.** These include lack of transportation and child care for school involvement, linguistic barriers, rigid working hours, and ambivalence about the role of parents in schools on the part of many teachers, principals and parents;

- **Providing adult basic education, English as a second Language (ESL), and basic literacy skills to parents to enable them to help their children in school.** More than 10,000 Massachusetts residents are on waiting lists for ESL; nearly one million adults in Massachusetts have fifth-grade or lower reading and math skills;

- **Overcoming high truancy rates.** About 45% of high school students in Boston were absent 16 or more days during the 1996-1997 school year; in 1999, more than 20% of students were out four weeks or more. While elementary and middle school truancy rates are improving, severe truancy rates continue at Boston's 12 non-exam high schools;

- **Engaging and affirming an increasingly diverse student population with curriculum**

frameworks that reflect all cultures' histories, contributions, and traditions;

- **Addressing the needs of children with disabilities in and out of school to encourage their full participation and development;**

- **Addressing requests on the part of headmasters for increased authority within the schools commensurate with new levels of accountability while at the same time respecting the professional rights of teachers and staff.** This has been the cause of contention in recent contract negotiations;

- **Recruiting qualified teachers, principals and administrators** in a highly competitive job market nationwide as many Boston teachers near retirement age;

- **Providing access to high quality, affordable child care and early childhood education for children to enhance school readiness;**

- **Addressing the downside of the boom economy — the rising cost of housing** — which is increasing rates of overcrowding, homelessness, and childhood hunger in Boston, undermining students ability to focus on their school work;

- **Securing public and private support for excellent out-of-school enrichment programs for children whose families cannot otherwise afford them.** According to the Mayor's Task Force on After-School Time, the parents of two-thirds of Boston's children aged 5–14 work and cannot care for their children after school, when children are most likely to get in trouble and to commit crimes. A 1998 survey found that parents of 16,000 middle school children expressed a need for after-school programs. Over the next two years, more than 2,000 families receiving welfare in Boston will lose their benefits. As they join the labor force, more than 3,500 additional children will be in need of after-school care;

- **Continuing the dialogue and search for common ground on controversial issues** such as the MCAS, walk-to and neighborhood schools, bilingual education and contractual issues such as seniority and lengthened school days;

- **Ensuring that Boston residents have the education necessary for employment in the city's high-growth, high-paying sectors.** Only 30% of Boston residents currently hold college or professional degrees and many of Boston's college graduates are originally from elsewhere. The challenge is to send more local residents through two-year and four-year colleges.

Source: This story is drawn in part from *"Everybody's Out There for Youth"* Office of Community Partnerships, City of Boston, April, 2000.

Out-of-School Time and Activities

Understanding that school time alone is not sufficient for children's development, the City of Boston is putting new emphasis on quality after-school and summer programs. In the spring of 2000, the Mayor's Task Force on After-School Time issued a report based on recent assessments. It called for increasing funds for after-school programs, strengthening program quality, measuring impact, and creating stronger connections among schools, programs and families. The report also called for expanding program options, with particular emphasis on children with disabilities and high school students. In implementing the recommendations in the report, the City's 2:00 – 6:00 After-School Initiative is collaborating with Parents United for Child Care's Making the Most of Out of School Time, the United Way of Massachusetts Bay, the Boys and Girls Clubs, the YMCA of Greater Boston and many community-based programs.

Early Childhood Education and Child Care in Boston

Quality early childhood education and child care have been shown in recent studies to promote children's school readiness, health and academic success — as well as to strengthen working families and the local economy in a time of labor shortages. In Massachusetts, about 70% of the parents of 0-5-year olds are working. However, as elsewhere, families with young children face many barriers in gaining access to high quality programs.

- Unsubsidized care in Boston is expensive. Annual care, on average, costs $10,000 - $12,000 for an infant, $8,000 - $10,000 for a toddler, and $5,000 - $8,000 for a pre-kindergarten child.

- Despite a 151% increase in state allocations for subsidized child care from fiscal year 1995 to 2000, many low-wage working families are still in need of subsidies. Statewide, 19,000 children of low-wage working families were on the waiting list for state subsidies in 1999, with approximately 3,300 children on the waiting list in Boston. The total number of subsidies for Boston in 2000 is 10,062, but demand far exceeds available space in licensed programs. Boston's licensed child care programs had the capacity in 1999 for 17,000 of the city's children, but Boston has 142,000 children between the ages of 0 and 16 according to 2000 BPS estimates). In 1999, there were 9,230 children in licensed center-based programs; about 3,505 children in licensed home-based providers; about 516 in the Boston Public School's Early Learning Programs; and, in programs for school-aged children, about 3,650 children from 6-14 years old. Without subsidies, many families must make informal, unregulated, and unlicensed arrangements.

- Recent community-based efforts supported by the City of Boston and the 0-8 Coalition have improved quality through facility construction and improvement, teacher training, and parents' involvement. Thirty-two center-based child care programs in Boston, or 16%, met national accreditation standards in 1999, and most are now working toward accreditation.

- Teacher education has been shown to be directly related to the quality of child care. In 1999, about 47% of Boston's center-based teachers and 22% of home-based providers had bachelors' or advanced degrees.

- Research shows that children do best with consistent care; however, because of low salaries and a prevalent lack of benefits, turnover rates are high. The average annual turnover rate in Boston is 23%, although turnover is only 9% in Boston's public school-based programs. On average, a home-based provider of child care in Boston earns only about $7.50/hour; an early childhood education teacher in a licensed center or Head Start Program earns about $11.00/hour — about 25% the average hourly salary with benefits of Boston Public School early childhood teachers.

- Boston Early Education Quality Improvement Project (Boston EQUIP) has established quality benchmarks for early childhood education/child care, surveying programs to measure progress. It is setting new goals for 2005. For more information: Christine Johnson-Staub, 617-0700 x229 or cjstaub@associateddaycare.org

For more information, contact Christine Johnson-Staub, 617-695-0700 x229, cjstaub@associateddaycare.org.

Source: Associated Day Care Services/Boston EQUIP, June, 2000.

Education Indicators

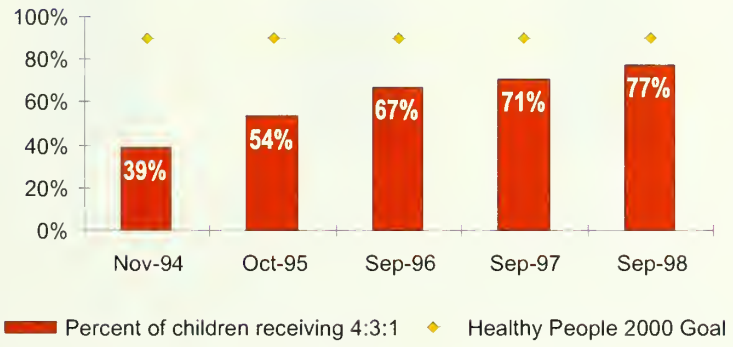
4.1 School Readiness

Two aspects that most influence school readiness are the health of children and the quality of child-care. Studies have found that a healthy child is a child ready to learn. Child care programs help children by providing formal and informal learning activities before entering grade school.

Immunization rates

86% OF CHILDREN BETWEEN THE AGES OF 24 AND 36 MONTHS WERE IMMUNIZED IN 1998, 77% WITH UP-TO-DATE IMMUNIZATIONS, THE HIGHEST RATES AMONG ALL CITIES IN THE NATION.

Up-to-date immunization rates for children aged 24 to 36 months, 1994–1998



Source: Boston Immunization Information System

What does this mean?

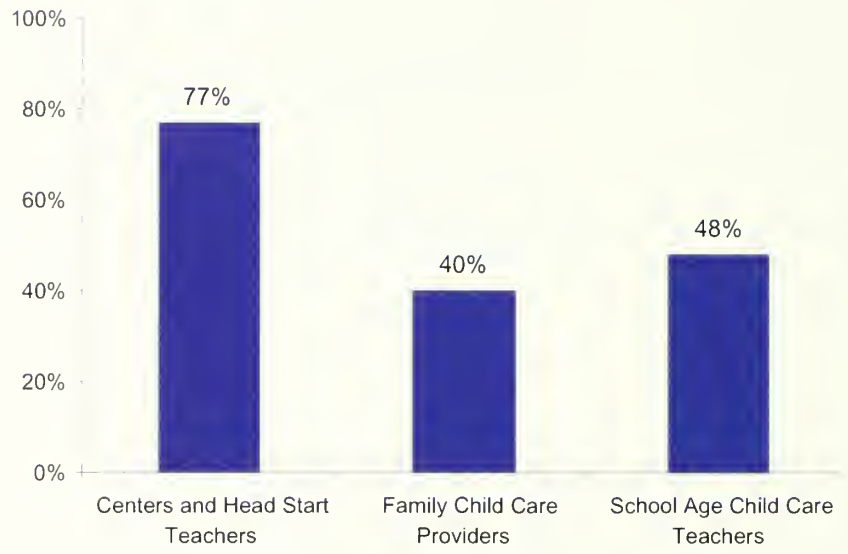
Immunization of children is a public health measure that prevents serious illness and increases school attendance. It also indicates that parents are connected to the primary care system. Boston has steadily increased the number of children who are up-to-date with all vaccinations, from a low of 39% in 1994 to 77% in 1998. The national Healthy People 2000 goal is 90%. This measure needs to be examined at the neighborhood level so that demographic correlations can be further understood.

(Also see Public Health section.)

Early childhood education training levels of child care workers

77% OF BOSTON'S HEAD START TEACHERS ARE TRAINED, BUT ONLY 40% OF ALL DAY-CARE PROVIDERS ARE TRAINED.

Percent of early childhood learning teachers/providers with specialized educational training, 1997



Source: Associated Day Care Services

What does this mean?

Enrollment in formal and informal day-care programs, which have staff trained in early childhood education, can help ensure the development of learning skills in children and allows for early intervention where necessary. Some of the major goals identified for Project EQUIP by providers of early education include: increasing the number of accredited programs to 25%, from 15% for centers and 5% for home-based child care; increasing training for teachers by 10%; increasing staff salaries by 20% (from an average of $14,000, which makes it difficult to attract high quality care for children); increasing parent participation by 50%; and physical improvements for facilities.

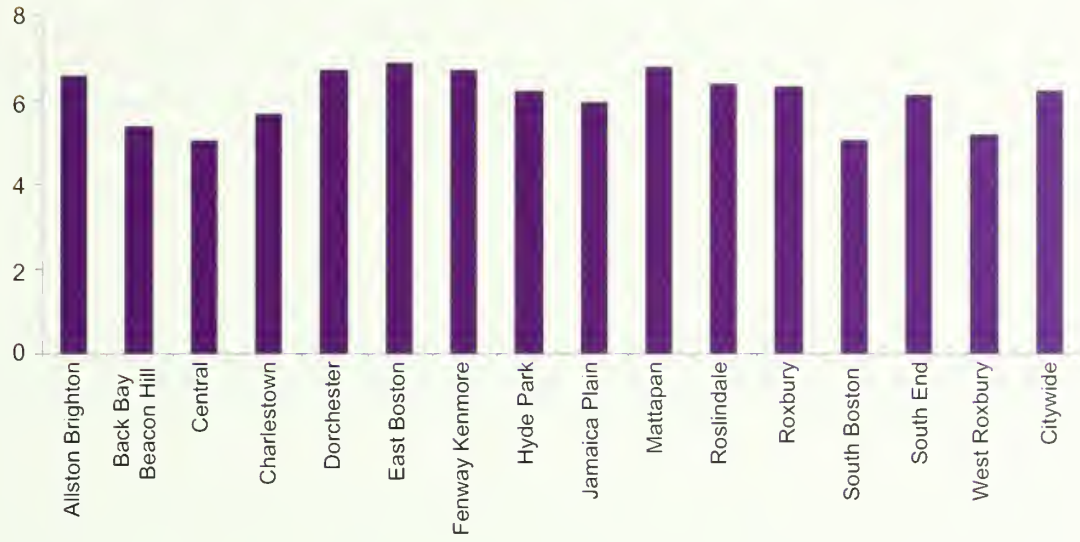
4.2 Confidence in the Public Education System

Confidence in the quality of public education is an important measure of a school system's success. Public perception affects people's choices and attitudes toward the Boston Public Schools, and has been found to be a major factor in people's decisions about where to live and bring up their families.

Public opinion of the Boston Public Schools

IN 1997, OVERALL SATISFACTION RATING IS ABOUT 6 ON A SCALE OF 1 TO 10 (10 = VERY SATISFIED). IN 1999, THE RATING DROPPED TO 5.6. BOSTON POLICE DEPARTMENT'S 1999 CITIZEN SURVEY SHOWS THAT PUBLIC SCHOOLS ARE BOSTON RESIDENTS' HIGHEST CONCERN.

Public opinion of the Boston Public Schools, 1997



Data Source: Boston Police Department, Citizen Survey, 1997
Average data for residents living in different neighborhoods using a 10-point scale, with 1 meaning not at all satisfied and 10 meaning very satisfied

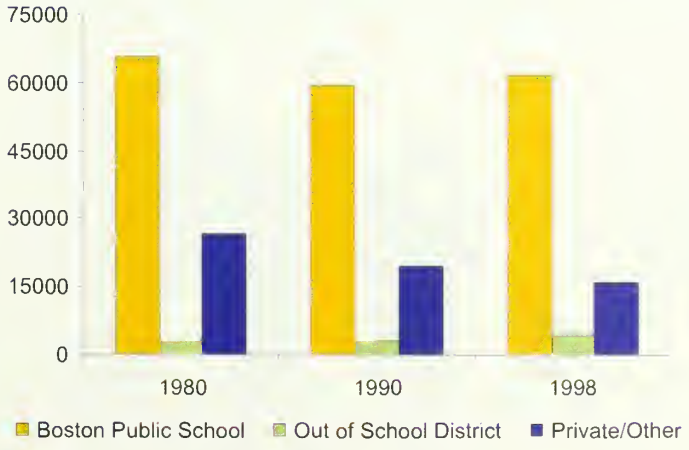
What does this mean?

Public opinion of the system affects school enrollment levels and gives us a sense of whether people feel that their children are getting a good education. Tracking public confidence tells us whether reform efforts have been clearly communicated to the residents. The 1997 Survey of 6,000 residents conducted by the Boston Police Department showed that neighborhoods with the highest number of children in the Boston Public Schools reported a level of satisfaction with the public school system at or above the citywide average. In 1999, the overall satisfaction rate dropped to 5.6.

Percent of school-age children in the Boston Public Schools

76% OF ALL SCHOOL-AGE CHILDREN IN BOSTON ATTEND THE BOSTON PUBLIC SCHOOLS.

Number of school-age children in Boston vs. public school enrollment, 1980–1998



Source: Boston Public Schools

What does this mean?

A continually high percentage of school-age children attending the public schools is a measure of public confidence in the school system. Data show that from 1990–1998, the Boston Public School student population has gone up, as has the school-age population. However, the number of children attending Boston's public schools as a percentage of all children has decreased from 84% in 1990 to 76% in 1998.

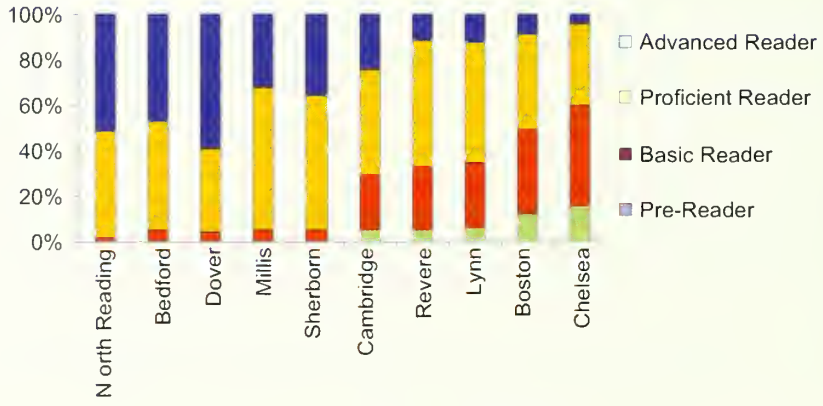
4.3 High Academic Achievement

A focus on academic achievement helps young people to develop their potential and compete in the world. The local business community too, is increasingly looking for workers who can read, write, be technologically competent, and solve problems. Studies show that learning requires a focus from early childhood through high school and beyond.

Percent of third graders reading at the third grade level

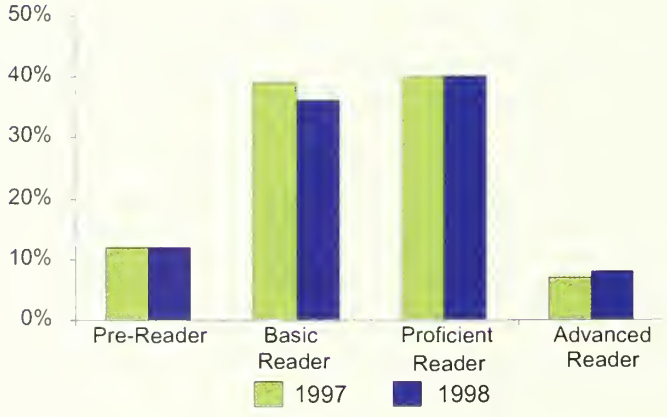
ABOUT 40% OF BOSTON'S THIRD GRADERS ARE READING AT PROFICIENT LEVELS AND LESS THAN 10% AT ADVANCED LEVELS. BOSTON FARES POORLY WHEN COMPARED TO OTHER COMMUNITIES IN METRO-BOSTON.

Highest and lowest grade 3 reading test scores in Metro-Boston, 1998



Source: Massachusetts Department of Education

Boston grade 3 reading scores, Iowa Test, 1997 and 1998



Source: Boston Public Schools

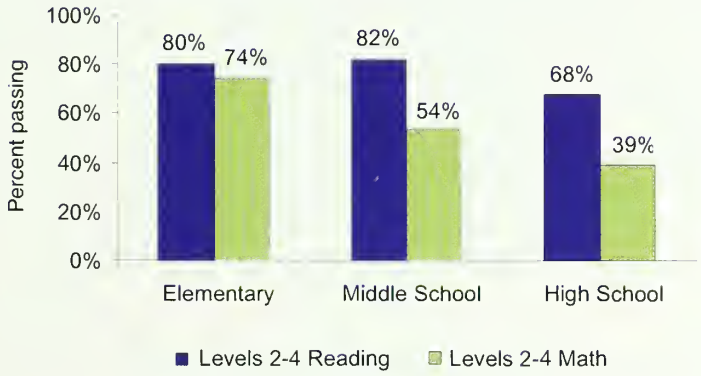
What does this mean?

Among educators there is a saying, backed by years of student data, that "Until third grade, a child learns to read. After third grade, a child reads to learn." Because the need for strong reading and writing skills in today's work world has grown, it is important that children become comfortable with reading and writing at an early age. This translates into a lifetime of learning for our children. Education research clearly documents that unless a child learns to read by the third grade, s/he can be expected to fall further and further behind in school, increasing the likelihood of academic failure or dropping out of school. Limited early literacy is also a strong predictor of such outcomes as substance abuse, teen pregnancy, underemployment and involvement with crime. The Read Boston program is making a concerted effort to ensure that all Boston students are fluent readers by the end of the third grade. Since 1995, Read Boston has had 20,000 books donated to the public school libraries and has linked a growing stream of volunteer reading tutors with students. In the 1998–1999 school year, 1,750 volunteers helped 2,000 kids to improve their reading skills.

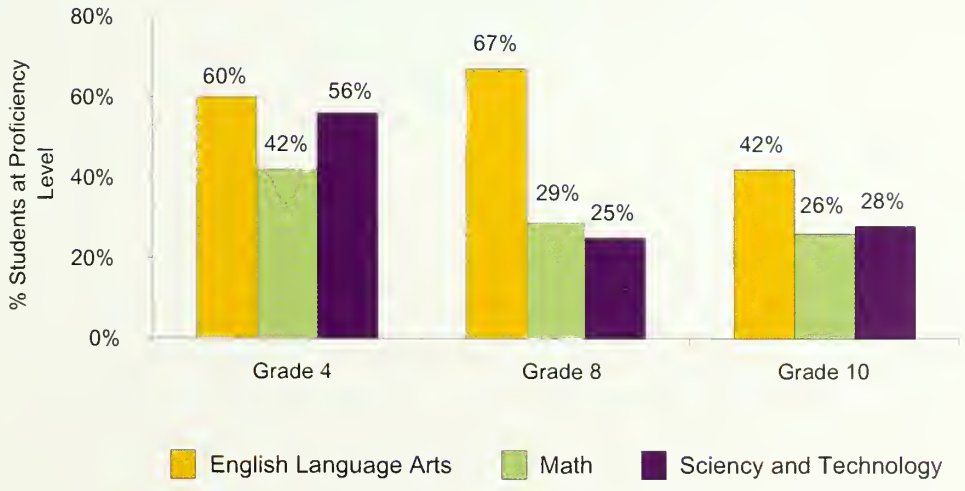
Test scores of Boston public school students by grade, race, and gender

TEST SCORES SHOW GREAT DISPARITY BY RACE, WITH BLACK AND LATINO STUDENTS FALLING BEHIND. THE HIGHER THE GRADE LEVEL, THE LOWER THE SCORES IN BOSTON COMPARED TO THE NATIONAL AVERAGE.

Stanford 9 reading and math test scores by grade level, 1998



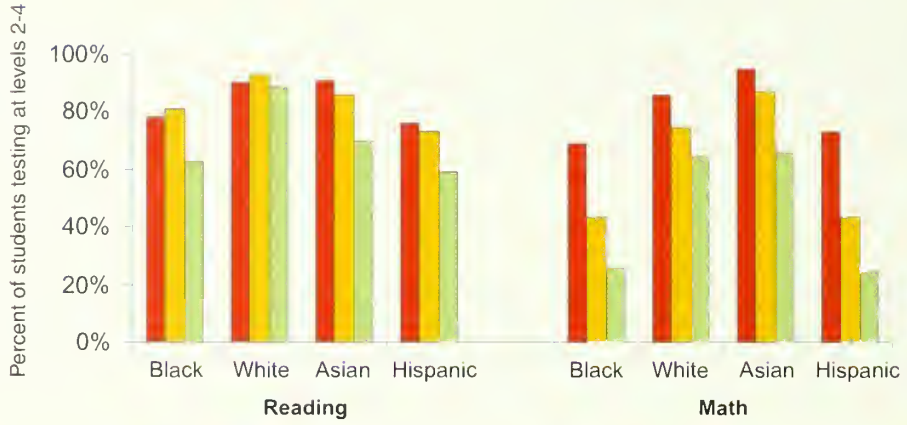
MCAS performance by grade, 1999



Source: Boston Public Schools

MCAS is the Massachusetts Comprehensive Assessment System — a statewide test to assess academic proficiency

Stanford 9 reading and math test scores by race, 1998



Source: Boston Public Schools

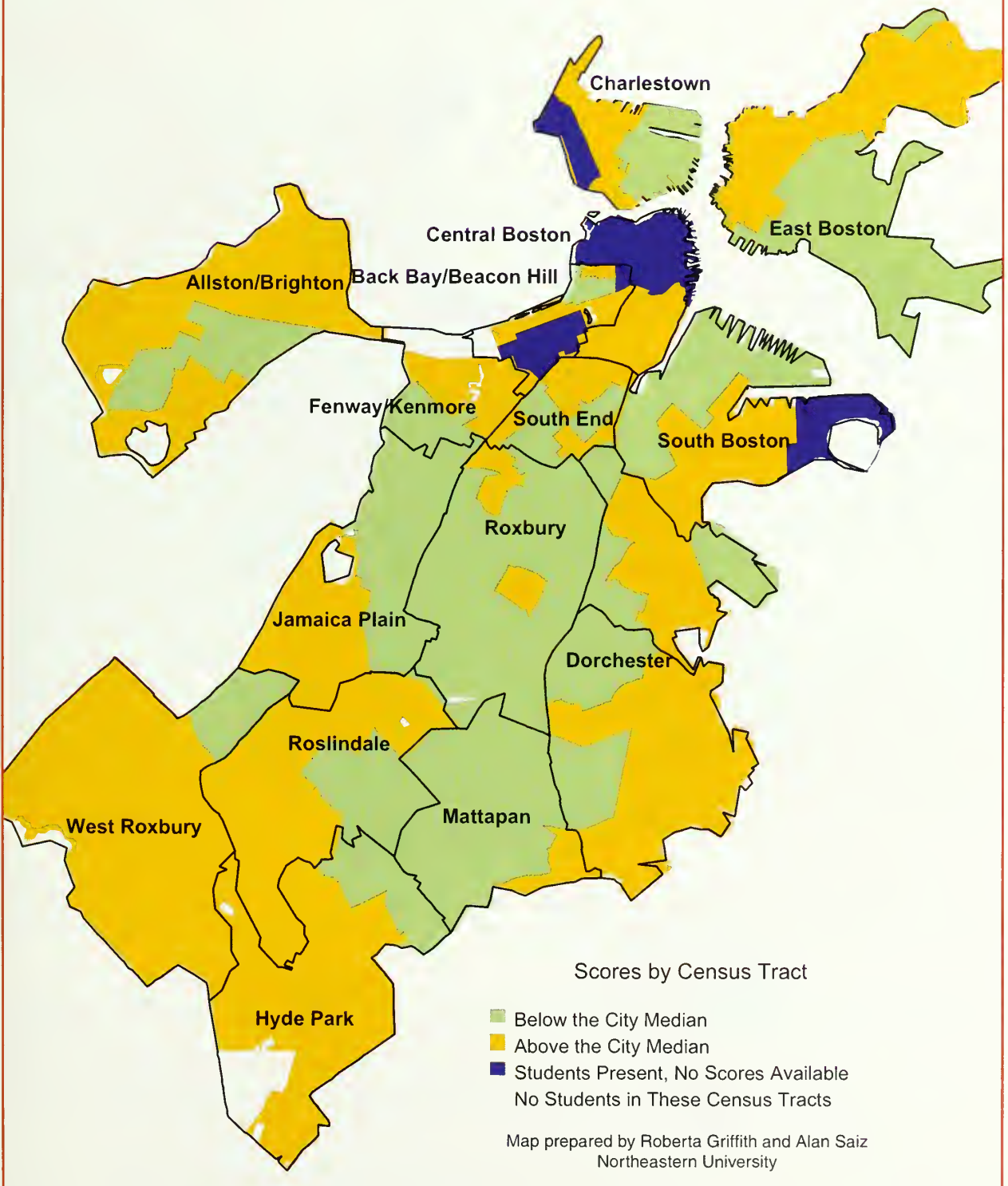
What does this mean?

In 1999 Boston students showed some improvement in MCAS scores over 1998 levels; however, concerns still remain over the ability of the class of 2003 to successfully meet the MCAS graduation requirements, given their general lack of access to high quality instruction, curricula, and facilities in the past. While 1999 scores have continued to show small gains, concerns remain about racial disparities and the rate of improvement in scores as compared to the Boston School Department's academic achievement goals. Recent improvement does, however, indicate some success in the Boston School Department's effort to align the Boston Public School curriculum with the learning goals tested by the MCAS.

Test scores allow for only limited comparisons, as children have diverse learning styles and demonstrate excellence in different ways. The Boston School Department is aware of this and is moving toward the use of portfolio assessments along with test scores. This methodology will both allow for individual assessment and help track ongoing progress in the future.

Also see Stanford 9 test scores by neighborhood maps on following pages

Stanford 9 math scores for 6th, 7th and 8th grades, 1998



Map prepared by Roberta Griffith and Alan Saiz
Northeastern University

Stanford 9 reading scores for 6th, 7th and 8th grades, 1998

Map prepared by Roberta Griffith and Alan Saiz
Northeastern University

4.4 Parental and Community Involvement

Active parental involvement is important to the success of children's education, as is involvement of the larger community in preparing the next generation of leaders and workers for our collective economic success.

Percent of parents attending middle school open houses

NO DATA AVAILABLE AT THIS TIME.

What does this mean?

Well attended open houses are indicative of a school system in which parents and teachers are working together on the educational and social progress of a child. The dialogues and relationships built at these open houses enhance students' chances of success. These relationships are particularly critical at the middle school level, when children are in early adolescence. There are, however, many obstacles that can affect the ability of parents to engage with their child's education, including language barriers, lack of knowledge of the school system, lack of transportation, other demands on time, and resistance to flextime by some employers to accommodate parents.

Scholarship support for higher education from community partnerships

BETWEEN 1986 AND 1996, HIGHER EDUCATION PARTNERSHIPS GARNERED $110 MILLION IN SCHOLARSHIP FUNDS FOR BOSTON PUBLIC SCHOOL STUDENTS.

What does this mean?

Boston's economic success depends upon having a well-prepared, well educated work force. To enable BPS students to enter and attend college, Boston area organizations provide scholarship funds. Data from Boston Higher Education Partnership indicate that from 1986 to 1996, contributions of student scholarships to the students in the Boston Public Schools exceeded $110 million. Other pro-bono contributions exceeded $40 million and school and community partnerships also assisted in raising external grants of over $55 million.

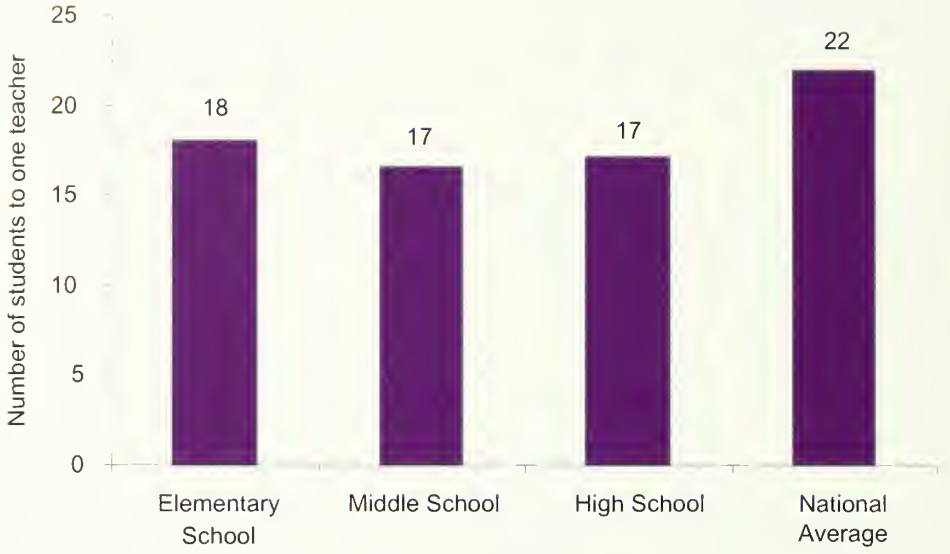
4.5 Quality Teaching

The quality of teaching is a function of teacher qualifications, class size, and the school environment, as well as a student's preparedness, support, and encouragement at home and in after-school programs.

Ratio of students to teachers in regular education programs at elementary school level

REGULAR EDUCATION PROGRAMS IN BOSTON'S ELEMENTARY SCHOOLS HAVE 18 STUDENTS PER TEACHER. THE NATIONAL AVERAGE IS 22.

Ratio of students to teachers by level, 1997



Source: Boston Public Schools

What does this mean?

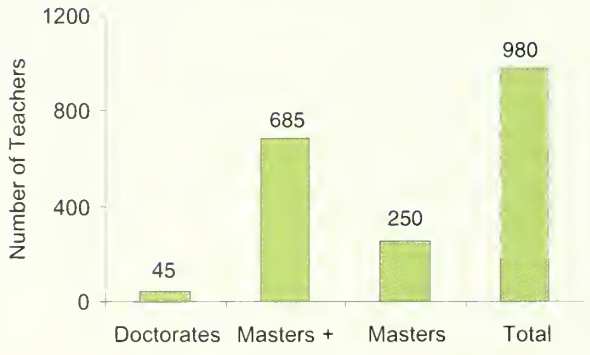
In order to improve the quality of the classroom learning environment, there has been an effort across the nation to decrease the ratio of students to teachers. A lower ratio is seen to allow for more focused efforts by the teacher and increased one-on-one interactions, resulting in improved student performance. The ratio of teachers to students is most critical at lower grade levels when it is essential to focus on individual learning (particularly reading), developing learning skills, and good study habits.

Percent teachers with advanced degrees

TEACHER QUALIFICATIONS IN THE BOSTON PUBLIC SCHOOLS ARE HIGH. BUT CLASS LOAD AND SIZE CAN AFFECT THE ABILITY TO PROVIDE QUALITY INSTRUCTION. ALSO, SOMETIMES TEACHERS DO NOT TEACH IN THEIR SPECIALITY AREAS.

DATA ON TEACHER-TO-STUDENTS LOAD NOT AVAILABLE AT THIS TIME.

Teachers with advanced degrees, 1996-1997 school year



Source: Boston Public Schools

What does this mean?

Almost 78% of the teachers in Boston's high schools hold advanced degrees and therefore have an in-depth knowledge of the subject matter being taught. While this knowledge should translate into high quality teaching, it often cannot because of the overall teaching load carried or because teachers are not assigned to teach in their area of specialty. A Bain & Company report comparing high schools across the country indicates the need to evaluate student load being carried by Boston's high school teachers, which — because of the number of students assigned to a teacher — could affect his or her ability to provide individual student feedback. The Boston School Department is beginning to address the issue of teacher load and assignments, which can have a tremendous impact on both the quality of teaching and the degree of teacher accountability for the academic advancement of students. In addition, emphasis is being placed on the concept of small learning communities within larger school environments to provide individual support and to enhance academic achievement.

4.6 Quality School Culture and Environment

Of the 25 largest urban school systems in the nation, Boston's operating budget and expenditure on a per student basis is the third highest. However, a quality school education relies not just on money, but on a culture and environment of excellence and high academic expectations.

Percent of high schools with libraries, gyms, labs, and renovated schoolyards

ALL BOSTON PUBLIC HIGH SCHOOLS ARE NOW ACCREDITED, INDICATING THE PRESENCE OF ALL TEACHING TOOLS NECESSARY: FACILITIES, CURRICULUM, AND SUPPORT SERVICES.

What does this mean?

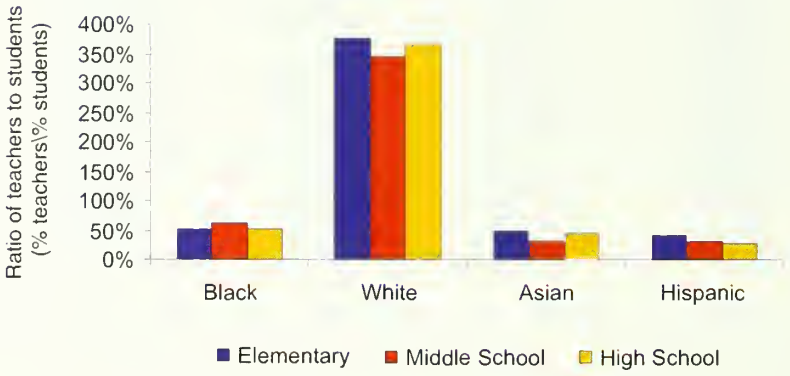
Classrooms are not the only setting where learning takes place in schools. Libraries, gyms, labs and schoolyards all provide settings in which learning can be enhanced. Capital resources invested in these components provide returns well beyond their initial cost. The City of Boston has invested $195 million in capital improvements in the schools since 1996 and more than $8.2 million in refurbishing 50 schoolyards through the Boston Schoolyard Initiative, a public/private partnership.

A good measure of the quality of a high school is its accreditation status, which ensures the quality and adequacy not only of physical resources but also of the academic planning, support, and infrastructure necessary to the provision of a high-quality education. In the past, many of Boston's high schools were in danger of losing accreditation. Today all of Boston's high schools are accredited.

Ratio of racially diverse teachers to student body by level

AS OF 2000, BOSTON'S PUBLIC SCHOOL STUDENT BODY IS 15% WHITE, 49% BLACK, 27% LATINO AND 9% ASIAN. ITS TEACHERS AND FACULTY ARE 61% WHITE, 26% BLACK, 9% LATINO AND 4% ASIAN.

Ratio of racial diversity of teachers to student body, 1997



Source: Boston Public Schools

What does this mean?

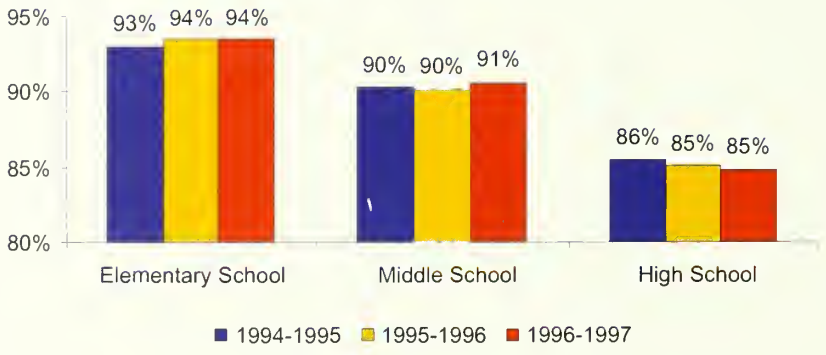
Young people often need role models who share their culture and beliefs.

Of the 25 largest U.S. urban school systems, Boston has among the highest racial and ethnic diversity among its student body. In fact, data shows that more than 37 different languages are spoken among Boston Public School students. This, in itself, indicates a challenge in dealing with issues of cultural diversity. As older teachers in the Boston Public School system retire, the opportunity exists to diversify the cadre of public school teachers and faculty to more fully reflect the racial and ethnic diversity of the student body. Efforts to recruit and retain racial and ethnic minorities in the Boston Public Schools are, in fact, already underway.

Attendance, promotion, and dropout rates by level and race

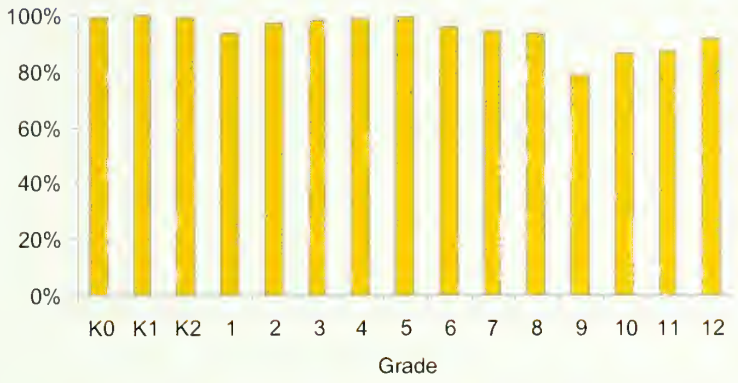
HIGH SCHOOL STUDENTS HAVE THE LOWEST ATTENDANCE RATES. PROMOTIONS DROP AND DROP-OUTS INCREASE AT THE MIDDLE SCHOOL LEVELS. DROP-OUT RATES ARE HIGHEST FOR LATINO STUDENTS FOLLOWED BY BLACK STUDENTS.

Boston Public School attendance by grade level, 1994–1997



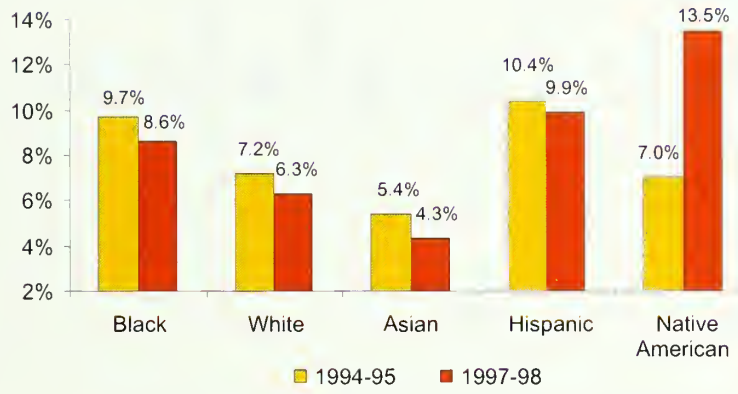
Source: Boston Public Schools

Promotion rates by grade, school year 1997–1998



Source: Boston Public Schools

Dropout rates by race, 1994–1995 and 1997–1998



Source: Boston Public Schools

What does this mean?

A critical aspect of academic achievement is the regularity of a child's attendance at school. High attendance and low truancy rates reflect the willingness of students to engage with learning. These factors indicate that the system is meeting their needs and providing necessary support. Drop-out rates in Boston are roughly 50% greater than the average for the 25 largest urban school systems in the nation, although they are showing signs of improvement.

While attendance rates in Boston are good at the elementary level, they start to decline at the middle and high school levels. Data also indicate a disparity across racial and ethnic groups with regard to dropout rates. This measure, along with others taken across racial and ethnic groups, illustrates a critical need for better parent-teacher interaction and services that can provide the support necessary for students, particularly racial and ethnic minorities, to succeed both in and out of school. Some advocates fear that the new emphasis on standardized tests may increase the drop-out rate.

4.7 Out-of-School and Lifelong Learning Opportunities

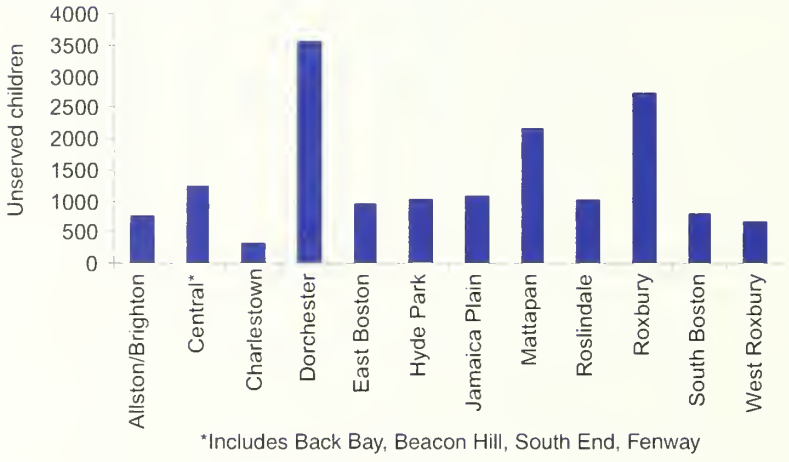
As children grow, they can build important skill sets through extra-curricular activities. For young people, too, extra-curricular and structured after-school activities can provide enrichment while also helping to steer them away from likely use or experimentation with drugs and alcohol, sexual activity, or criminal behavior. Data from the Boston Police Department show that 33% of all juvenile crime occurs between the hours of 2:00 and 6:00 p.m. For adults also, lifelong learning is important. These

opportunities are particularly important in the face of today's changing economy. In addition, newcomers to Boston need opportunities to become active and involved in order to advance economically.

Number of children served in after-school programs vs. number of children ages 5–13

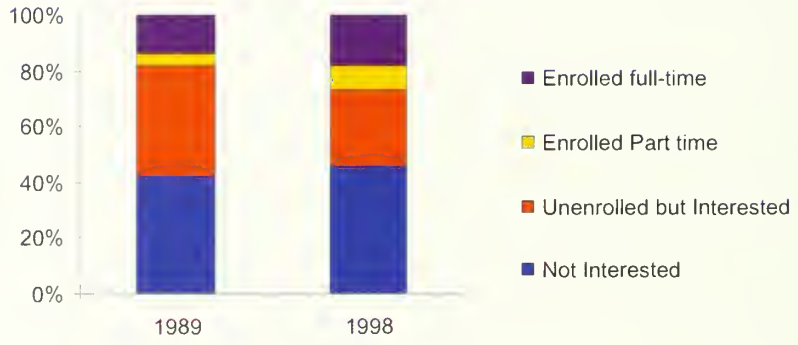
DEMAND FOR AFTER-SCHOOL PROGRAMMING EXCEEDS THE NUMBER OF AVAILABLE SLOTS.

After-school care needs-assessment by neighborhood, 1998



Source: Boston 2:00 – 6:00 Initiative

Citywide after-school needs survey



Source: Boston 2:00 – 6:00 Initiative

What does this mean?

Nearly 17,000 elementary and middle school children in Boston are currently enrolled in after-school programs. Over the next two years, an estimated 2,000 families will stop receiving welfare benefits. As they join the labor force, roughly 3,500 additional children will need day care. Parents have revealed that barriers to having their children attend after-school programs include the lack of available programs, cost, the uneven quality of programs and lack of transportation. Parents identified safety and academic achievement as their highest priorities.

Adult education and English as a Second Language (ESL) enrollment vs. capacity

ENGLISH AS A SECOND LANGUAGE (ESL) WAITING LISTS RANGE FROM SIX MONTHS TO THREE YEARS AT VARIOUS LOCATIONS IN BOSTON. ENROLLMENT DATA NOT AVAILABLE AT THIS TIME.

What does this mean?

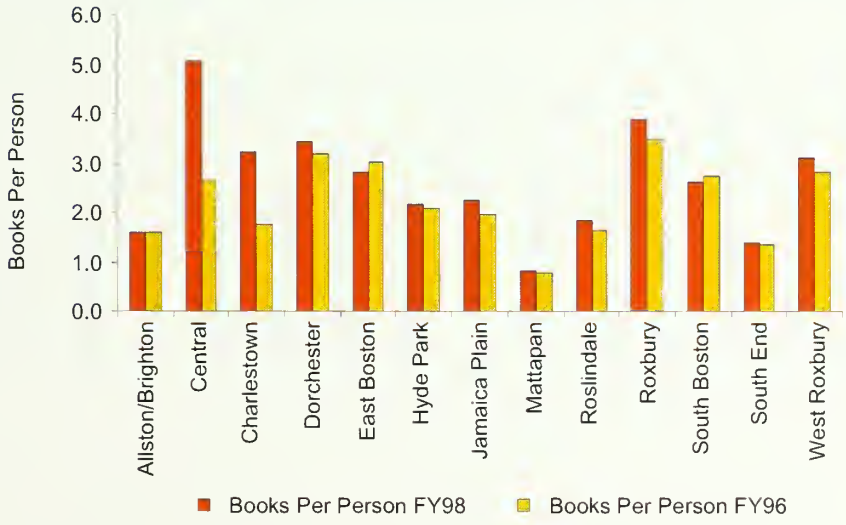
Recent studies by MassINC. indicate that many people in Boston lack basic literacy, making them unable to effectively participate in the workforce.

The language barrier is a significant impediment to integrating new immigrant populations into Boston's workforce and civic life. Lack of English also prevents many parents from helping their children with homework, or interacting with their child's teachers. Anecdotal data gathered suggest that the enrollment at community colleges and related institutions that provide ESL training exceeds capacity, with waiting lists ranging from six months to a period of up to three years.

Number of books per capita in Boston's public libraries versus books in circulation in Boston, by neighborhood

THE TOTAL INVENTORY OF BOOKS IN BOSTON'S PUBLIC LIBRARIES INCREASED FROM 1996 TO 1998, AS DID CIRCULATION. THE WEST ROXBURY, CENTRAL BOSTON, CHARLESTOWN AND ROXBURY BRANCH LIBRARIES SAW THE GREATEST PERCENTAGE INCREASE IN READERSHIP.

Books per capita in circulation, by neighborhood, FY96 and FY98



Source: Boston Public Library

What does this mean?

Boston has a rich resource in the Boston Public Library, well distributed throughout its neighborhoods. The main library and its twenty-six branches hold a total of 2,219767 books or about 3.87 books per capita. The increase in the distribution of library cards to children through the Boston Public Schools and the Read Boston Program has had a profound impact on the circulation of books in Boston's neighborhoods, indicating an increased interest in reading and literacy. In addition, the

Boston Public Library branches are becoming an important community resource, offering Internet training workshops, nutrition and health-related lectures, and venues for children's reading, educational activities, and community meetings.

Circulation of books in neighborhood branch libraries increased in all but two neighborhoods in Boston—East Boston and South Boston. While some neighborhoods such as Roxbury, West Roxbury, and Central Boston saw an increase in circulation ranging from three to six books per capita, the neighborhoods of Mattapan, the South End and Allston-Brighton are seeing less than two books per capita in circulation.

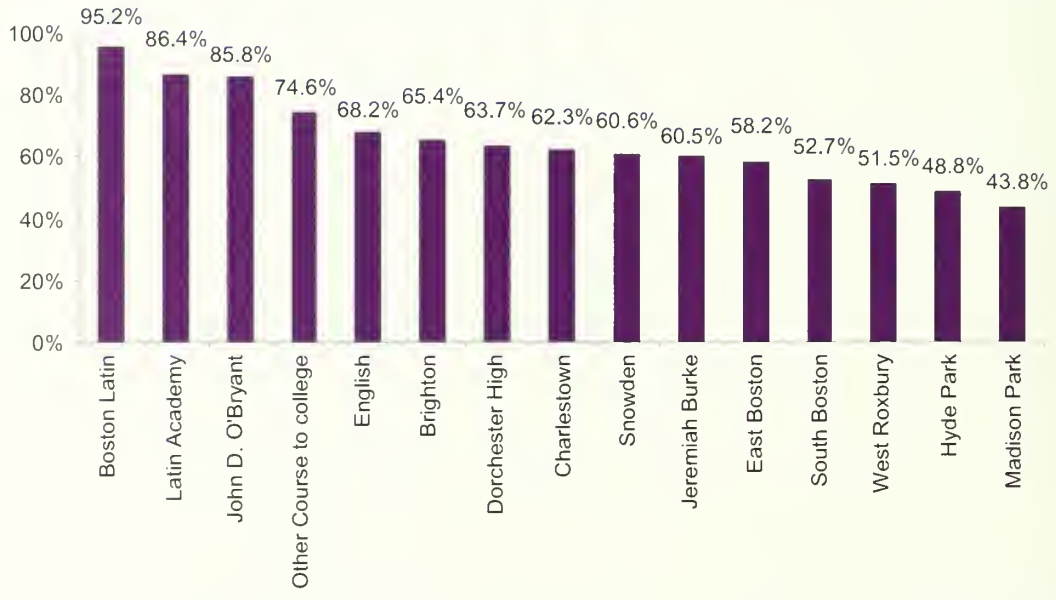
4.8 Higher Education Opportunities

Boston's economy is continuing to show growth in sectors that require a college-educated workforce. A college education is increasingly important to economic success. The ability of Boston students — a great majority of whom attend Boston Public Schools — to complete higher education programs is an indicator of a school system that prepares students to excel.

Percent of Boston Public School students who go to college

68% OF GRADUATES FROM THE CLASS OF 1997 ENROLLED IN COLLEGE OR VOCATIONAL TRAINING, A HIGHER PERCENTAGE THAN ANY CLASS BEFORE THEM.

Number of Boston Public School students attending college or vocational training, 1997



source: Boston Private Industry Council

What does this mean?

Since the mid-1980s, the Boston Private Industry Council (PIC) has undertaken an annual follow-up survey of each graduating class from the Boston Public Schools. This survey is aimed at tracking college, training and employment status. According to a February 1999 report prepared for the PIC by the Center for Labor Market Studies at Northeastern University, 2,670 students graduated from Boston Public Schools in the class of 1997. A survey representing 70% of the students indicated that 68% were enrolled in college or training, a 3% increase from the class of 1996. Enrollment rates varied by race, with Latino and black students attending college at much lower rates than whites and Asians.

Adult educational attainment rates

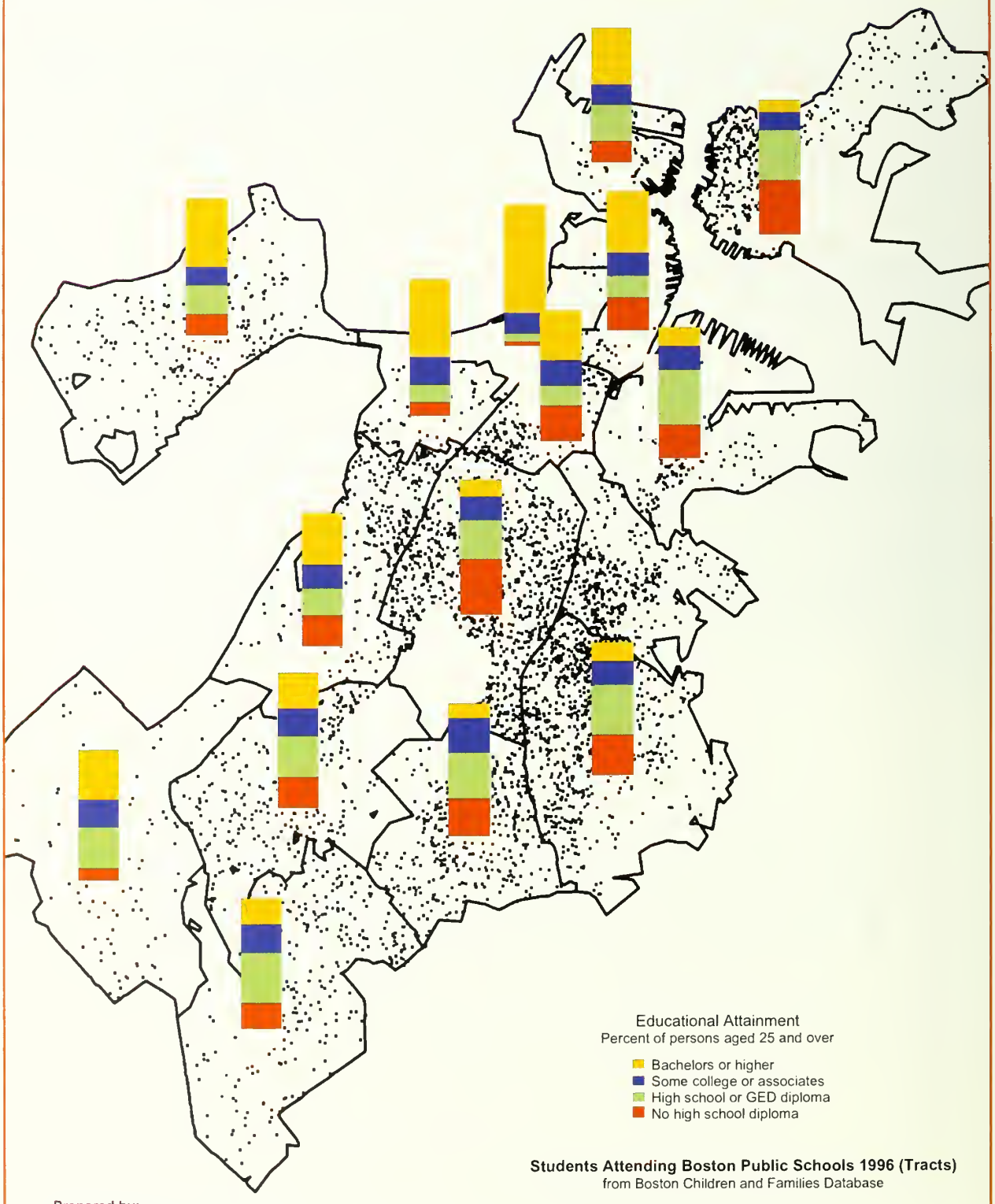
BOSTON NEIGHBORHOODS WITH THE HIGHEST NUMBER OF CHILDREN HAVE THE LOWEST ADULT EDUCATIONAL ATTAINMENT RATES AMONG ADULTS.

What does this mean?

As Boston's economy grows, so does the need to ensure that Boston residents have the ability to obtain high-growth, high-paying jobs. Currently, only 30% of Boston residents have completed college or hold professional degrees. This affects the ability of Boston residents to access high-paying jobs that are increasingly being filled by suburban residents. Juxtaposing Boston Public School student data with adult educational attainment data indicates that neighborhoods with a high number of children attending Boston Public Schools also have low rates of adults who have had the opportunity to go on to higher education. Educational attainment levels of parents is often a key variable in children's educational performance, pointing to the need for adult education to improve school outcomes.

See map on following page

Boston Public School students and adult educational attainment rates


Educational Attainment
Percent of persons aged 25 and over
Bachelors or higher
Some college or associates
High school or GED diploma
No high school diploma
Students Attending Boston Public Schools 1996 (Tracts)
from Boston Children and Families Database
1 Dot = 10 Students
BRA Planning Districts

Prepared by:
Alan Saiz, College of Criminal Justice
Northeastern University

SECTION FIVE

Environment

Vision

A community that delivers safe water, air and land to residents, provides habitat for a diversity of species, handles the impact of human activities within ecological limits and offers attractive places for the enjoyment of residents and visitors alike.

Indicators of a Healthy Environment	Measures	How Is Boston Doing?
5.1 Smart Growth	■ Changes in regional and local forest, open space, and agricultural land vs. developed land	■ From 1970 to 1990, the region's forests, agricultural land and open space decreased by approx. 76 sq. miles; 36% since 1950
5.2 Clean Air	■ Air-quality rating as measured by: — Childhood asthma rates — Good air quality days in Boston as determined by particulate matter in air	■ While the number of "good" air-quality days in Suffolk County doubled from 150 days in 1985 to 300 days in 1995, asthma rates increased among children
	■ Number of buses using clean fuels	■ 235 low-emission alternative-fuels vehicles in the State's fleet
5.3 Clean Water	■ Swimmability and fishability of Boston's waterways	■ 8 miles of beach along Boston Harbor are swimmable. Fishability and swimmability of rivers vary
	■ Drinking water quality and miles of service lines upgraded	■ Boston has high quality drinking water at the source, old infrastructure can cause health problems. Upgrades are in process
5.4 Clean Useable Land	■ Number of acres of 'brownfield' sites by neighborhood vs. number of acres restored, by land-use type	■ The number of reported contaminated sites in Boston is decreasing and now totals 2,247
5.5 Healthy Eco-systems	■ Acres of protected wetlands	■ Boston has over 100 acres of wetlands in 10 neighborhoods
	■ Richness of species: number of bird species and total number of birds sighted	■ 401 birds from 21 species sighted on a single day at two sites in Boston
5.6 Attractive Green and Recreational Spaces	■ Acres per 1,000 persons of open space (community gardens, parks, urban wilds) by neighborhood	■ Boston has 9.6 acres of open space per 1,000 residents. Neighborhood distribution of open space varies
	■ Miles of accessible Harborwalk	■ Approx. 25 miles of the 43.5 mile Harborwalk are accessible to the public. Two more miles are in design
5.7 Beautiful Communities	■ Cleanliness rating of streets and public parks by neighborhood	■ Over 70% of all Boston parks meet quality and maintenance standards
	■ Percentage of city under tree cover by neighborhood	■ About 21% of Boston is tree covered. Neighborhood rates vary
	■ Noise complaints by neighborhood	■ Data not available at this time
	■ Number of bulbs/annuals, street trees per 1,000 persons put out by Parks Dept.	■ 500,000 bulbs planted since 1999
5.8 Environmental Responsibility and Stewardship	■ Percentage of household trash recycled	■ Bostonians recycle 13.8% of household waste. Total trash generated continues to increase
	■ Energy usage by source	■ Data not available at this time

Boston's Environment

Our environment is the air we breathe and the water we drink. It is the pleasure we feel as the seasons change in the place we live that we also share with our neighbors and other species.

Boston is known as a very livable city. Its downtown and neighborhoods are walkable, it faces the sea, is endowed with an historic system of parks, has excellent public transportation and is built on a human scale. Boston's quality of life owes much to both the natural environment and to a history of citizen activism and public investment.

Historical context

Decades of open space acquisition around the turn of the century left us the legacy of the "Emerald Necklace", which celebrated its 100th anniversary in 1996. This legacy includes the Muddy River and Back Bay Fens, the Arnold Arboretum, Franklin Park and Franklin Field, Carson Beach and Castle Island, the Charles River's winding riverfront, green parkways linking the city to its suburbs, and the Metropolitan District Commission's great urban parklands, the Great Blue Hill and Stonybrook Reservations.

Over the course of the 20th century, this open space system was enhanced with playgrounds, ballfields, tot-lots and community gardens. However, for much of the century, Boston's park system and natural environment were left to deteriorate in the face of shrinking resources and mounting maintenance costs.

However, a new kind of environmental activism was in the making. In an act reminiscent of the Boston Tea Party in its participants' determination, residents of five inner core neighborhoods united in 1968 to stop expansion of I-95 through the heart of the city. This resulted in a moratorium on new highway construction within the Route 128 beltway and in construction of Boston's Southwest Corridor Park and transit line.

Boston's response to the fledgling environmental movement was the Boston Conservation Commission in 1976 and, later, the Environment Department, to provide oversight and guidance on development, historic preservation, wetlands protection, and other issues.

Concerned citizens formed citywide organizations like the The Franklin Park Coalition, Boston Natural Areas Fund, and Boston Urban Gardeners to work on emerging citywide issues. In 1984, a citizen coalition was formed, hoping to create a new groundswell of support for the city's parks and natural environ-ment. This coalition, the Boston GreenSpace Alliance, in partnership with the City of Boston and corporate and civic leaders, succeeded in improving Boston's green space, preserving still wild areas and marshlands, and protecting newly sprouted community gardens. Other environmental groups were founded — the Conservation Law Foundation, the Boston Harbor Association and Save the Harbor/Save the Bay — devoted to enhancing the city's waterways and environmental quality of life. Few major developments occurred in Boston without rigorous and even rancorous debate, almost always resulting in a better outcome from the point of view of Boston's environmental quality of life.

In the past few decades, environmentalism has merged with public health concerns, sparking yet another wave of urban environmental activism, public investment, and in the founding of new groups such as Alternatives for Community and Environment (ACE). This has led to the massive cleanup of Boston Harbor, to large-scale transportation planning and recycling, and a neighborhood-based environmental justice movement focusing on environmental hazards in low-income communities and other quality of life disparities. The Brownfields Act of 1998, supporting the cleanup and re-use of contaminated sites in Boston's neighborhoods, is one result of the new activism. Increased public open space in plans for the development of Boston Harbor is another. Despite its history of success, Boston faces major challenges in addressing the root causes of health concerns such environmental contaminants.

Regional context

According to the Environmental Protection Agency (EPA), while the total population of Massachusetts grew by only about 5% in 15 years, the use of land for development grew by almost 25%, resulting in a loss of 44 acres each day by the late 1990s. Since 1950, Metro-Boston has lost 261,089 acres of open space — forests, agricultural land and wetlands — or 36% of the total in just 50 years. The region is already in violation of federal air quality standards, and with expected increases in automobile traffic, will experience a significant further loss in air quality by the year 2010. Some of Boston's air pollution comes from sources outside the region such as power plants in the Midwest, but a good portion comes from vehicles in the Boston area. Increasing traffic congestion and the preponderance of large, low gas mileage sport utility vehicles are damaging air quality.

Already traffic in the region is growing by 2.5% annually, and 80% of the region's expressways are now congested at rush hour.

Two-thirds of the region's rivers fail the state's water quality standard, and over 20 towns in the region have lost public water supplies to groundwater contamination. An estimated 28% of the wetlands in Massachusetts have been destroyed since Colonial times and most of the remaining 600,000 acres have been impaired. The state hopes to restore 3,000 acres of wetlands by the year 2010. Under the Massachusetts Wetlands Restoration Act, two acres along the Neponset River and 20 acres at the Neponset Marshes Reservation are being restored. Another 171 sites have been identified for restoration in the Neponset River watershed.

Massachusetts is expected to grow by about 800,000 residents between now and 2025, requiring an estimated 300,000 new houses. About 350 ,000 of these projected new residents are expected to locate in Boston's metropolitan region.

Since 1984, with the beginning of the $4.2 billion effort to rebuild the regional sewer system and clean up Boston Harbor, the region has seen unprecedented investment in infrastructure, including the $14 billion Central Artery/Tunnel Project. Boston Harbor's beaches are once again open to the public, and efforts to restore Boston's five rivers — the Charles, Neponset, Muddy, Mystic, and Chelsea — are also underway.

As Boston Harbor has become cleaner, the cities along its shore have become more attractive places to live, work, and visit. Ferries now carry people to and from downtown and Logan Airport and to communities on the North and South shores. Boston's 30 harbor islands, designated the Boston Harbor Islands National Recreation Area since 1996, are now used by more than 100,000 people per year. Boat trips take school children to George's Island, Outward Bound students to Thompson Island, and viewers to Brewster Island, which boasts one of the last remaining working lighthouses on the East Coast. The Campaign for the Water's Edge is seeking to make the improved harbor's edge accessible to all communities. Waterfront development is expected to inject salaries, wages, and business income of more than $2.2 billion per year to the Boston economy. Metro-Boston will also benefit from the renewable Energy Trust Fund, an offshoot of electricity deregulation in the state, which will begin to distribute $150 million for "green" energy projects by 2003.

Advocates are also working with national and local advocacy organizations to recapture federal funds from the Land and Water Conservation Fund — an annual pool of $900 million from offshore oil drilling leases earmarked for environmental conservation and restoration.

Increasingly, the municipalities of Greater Boston are realizing that they exist within a region, linked not only by the Quabbin Reservoir's water supply but by regional sewage and transportation systems as well. Amid renewed public debate about suburban sprawl, congestion, noise, housing shortages, and water and air pollution, municipal leaders are coming together to seek solutions. The Urban Resources Partnership, a coalition of community-based organizations and government agencies at the city, state and federal levels, is analyzing environmental issues in Greater Boston and developing collaborative strategies to address them.

Citywide context

With a density of 11,860 people per square mile, every acre of non-built space in Boston serves multiple purposes, providing recreation, habitats for wildlife, spaces for trees that clean the air, flood control storage areas, water filtration, food, and scenic beauty. These amenities also have an economic impact.

Boston has an unusually rich diversity of habitats for an urban area because of its harbor, large parks, islands, and rivers. Because of this, and with recent improvements, Boston's bio-diversity is increasing. The Back Bay Fens is home to more than 160 varieties of birds. A large group of upland sandpipers, a rare bird in Massachusetts, is now found in the grassy areas near Logan Airport. The American oyster catcher migrated here about ten years ago from the South to live on Boston's sandbars. Common nighthawks nest on city rooftops and Peregrine falcons have been re-introduced and are thriving.

The Menino Administration has augmented the City of Boston's commitment to coordinate environmental issues by creating a new cabinet-level position: Chief of Environmental Services. Throughout the city, water, sewer and utility lines are being updated, bridges repaired, parks rehabilitated, street lighting replaced and public buildings restored. Infrastructure improvements to the city's water and sewer pipes are producing cleaner rivers and a cleaner Boston Harbor. Rate payers are saving millions of dollars as the percentage of unaccounted-for water decreases, reducing the amount of water that must be purchased from the Massachusetts Water Resources Authority.

More improvements are planned, such as a 43.5 mile Boston Harborwalk ringing the harbor between the mouth of the Neponset River in Dorchester to the Belle Isle Marsh in East Boston. Over the next five years, the City of Boston plans to expand its usable parkland by 25%, with new parks over the Central Artery, improvements to the Waterfront and Harbor Islands, neighborhood pocket parks, and protected wetlands.

Neighborhood focus

Boston's neighborhood residents are increasingly involved in seeking solutions to the environmental issues that affect them. While Boston's environment is improving in many ways, great disparities exist among neighborhoods in terms of their environmental quality of life and health — as evidenced by disparities in childhood asthma rates and measures such as, land contamination and air quality. For example, asthma rates have increased dramatically and are highest in the 0—4 age group overall. A survey in one elementary school in Roxbury revealed that about 20% of its students have asthma as compared with 11% a decade ago.

Boston's neighborhoods also vary in the quantity and quality of their environmental resources — from Chinatown, with almost no open space resources, to Jamaica Plain, with more than nine acres per 1,000 residents, to Hyde Park, with more than 26 acres per 1,000 residents. Environmental justice organizations such as Alternatives for Environment and Community (ACE) are tracking these and other issues, correlating high rates of childhood asthma, for example, with the location of MBTA and other diesel-fueled bus and truck garages. Community development corporations are incorporating environmental planning into their new development plans, while Boston's network of community health care centers monitors residents' health status.

Neighborhood-based groups such as the South End/Lower Roxbury Land Trust, Dorchester Gardenlands Preserve, and citywide gardening groups like Boston Natural Areas Fund, work in partnership through Garden Futures to improve the city's 150 community gardens. The Dudley Street Neighborhood Initiative is planning to anchor revitalization of its urban village in its multicultural identity, expressed in part in new environmental amenities and small businesses focused on urban food production.

Boston's Parks Partners work to improve neighborhood parks, and sports leagues advocate for improved athletic fields. The Boston School Yard Initiative, a consortium of public and private funders, works with local groups to landscape

and enhance paved schoolyards and turn them once again into green amenities for the city's school children and neighbors.

The City of Boston is very active at the neighborhood level. The Boston Environmental Strike Team (BEST) a collaboration of all of the City's inspection agencies, enforces environmental regulation. The Boston Brownfields Project, organized in cooperation with the regional office of the EPA, identifies priority sites in Boston for cleanup and reuse. The Clean It or Lien It Program targets private owners of vacant lots, while Project Pride boards up abandoned buildings and cleans adjacent lots.

The City of Boston's Children and Families Initiative seeks to improve living conditions by enforcing the sanitary code with respect to conditions such as mold, mildew, lead paint, rodent and insect infestation, that can lead to pediatric asthma. The City has also devoted more resources to enhancing and protecting its street trees and the urban forest, and has added more gardeners to Parks Department crews. Finally, the Boston Youth Clean Up Corps, employing more than 2,500 young people each summer, removes tons of debris from thousands of sites across the city.

Remaining challenges

Today's environmental challenges are generally more complex than those we have faced before, making it important to stay informed and to advocate for continued action in the public policy arena. Environmental improvements also require citizen engagement, with residents taking more responsibility for their impact on the environment. Finally, progress lies in our ability to make wise choices as consumers and to collaborate across neighborhoods and municipalities.

- **Air pollution continues to be a problem in Boston, with many days during the summer registering worrisome ozone levels.** Although Boston has a better mass transit system than most American cities, it is not used to full potential. Also, most MBTA buses and its trains run on diesel fuel, contributing to air pollution. Poor air quality has been linked by some to a dramatic increase in childhood asthma rates.

- **Bostonians' choices will improve or diminish environmental quality.** According to the Northeast Sustainable Energy Association, the average American household consumes about 5,000 pounds of coal for electricity in the home and 1,000 gallons of gasoline and oil for its car(s), contributing to global warming and air pollution. The average car dumps its own weight in carbon dioxide into the Earth's atmosphere each year. Taking public transportation or walking whenever possible, buying fuel-efficient cars, weather-stripping windows, purchasing energy-efficient appliances, recycling and disposing of hazardous waste carefully can all contribute to a higher quality environment.

- **The region's growing population will require almost 100,000 new houses by 2025, but sprawl already contributes to longer commutes and environmental degradation.** Growth plans are needed for each municipality and for the region as a whole to guide development of public transportation nodes and corridors.

- **The cleanup of Boston's rivers requires collaboration, as rivers flow across political boundaries.** The condition of Boston's rivers — the Neponset, Muddy, Charles, Chelsea and Mystic — presents an environmental challenge and opportunity for a number of municipalities.

- **Boston's residents vary greatly in their access to high quality open space and environmental resources such as major parks, beaches and ballfields.** Improved access includes the need for new spaces and more inclusive design, as well as publicity about existing open space resources and accessible transportation in a variety of languages.

- **Ensuring equitable public access to Boston's harborfront is a constant challenge** considering the city's hot economy, requiring constant vigilance and negotiation as development projects are reviewed.

- **Infrastructure improvements often reflect a long history of deferred maintenance.** Without ongoing maintenance, today's built environment will become an added source of leaking toxins and environmental contamination.

- **Ongoing maintenance of Boston's parks and open spaces is also a concern.** Recent acquisition and capital investments in the city's natural and recreational environment will be undermined without sufficient governmental and community support.

- **The age of the city and its buildings contributes to problems of indoor air quality,** which may especially be a problem in the city's schools, given their closed ventilation systems. Also, many old houses and buildings still contain asbestos and lead paint. While Boston has an aggressive campaign to delead older houses, many still contain lead and pose a threat to children.

- **Waste management has improved slightly but a more comprehensive plan is needed, including public education, to reduce waste and increase recycling.**

- **Boston's environmental future lies in part in its ability to innovate and to create value out of wastes and obsolete industrial land.** Eco-industrial parks, as well as innovations such as aquaculture, urban biospheres for food production, and wind, tidal, and solar energy generation will ultimately define the 21st century city. Boston has the natural and human resources to be on the cutting edge.

- **As Boston enhances its environmental assets, it is becoming even more attractive to new residents with higher incomes.** How can Boston change and grow in keeping with its environmental assets? How can we both improve Boston's quality of life and protect its economically vulnerable residents from displacement? These are questions that do not have an easy answer.

The Community Preservation Act 2000

In September, 2000, landmark legislation, "The Community Preservation Act," was passed in Massachusetts, heralding an era of open space and historic preservation, affordable housing development and collaboration.

Environment Indicators

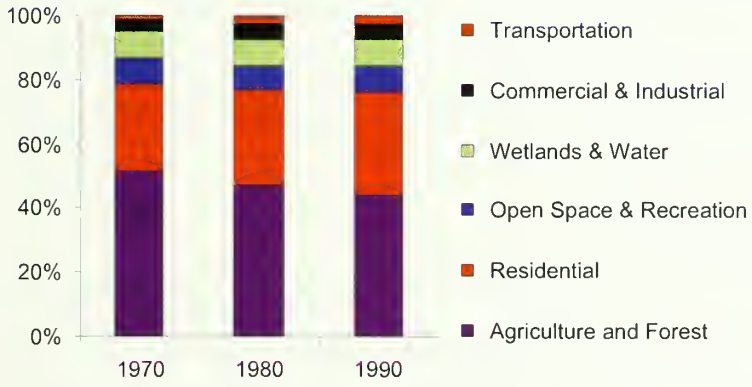
5.1 Smart Growth

As communities have prospered, residents have become more mobile. Lifestyles have changed, resulting in the movement of people and jobs out of dense city centers to rural and suburban locations with large houses and lots, and in commercial development on cheaper land. These choices have come at a cost. They have resulted in the loss of natural resources and have aided in the abandonment of the urban core. The US-EPA reports the loss in New England of more than 1,200 acres of open space a week to development, including two acres each hour in Massachusetts. Recognizing that growth and development will continue into the future, land use policies and strategies for "smart growth" that foster economic growth while protecting natural resources will ensure a high quality of life throughout the region.

Changes in regional and local land use

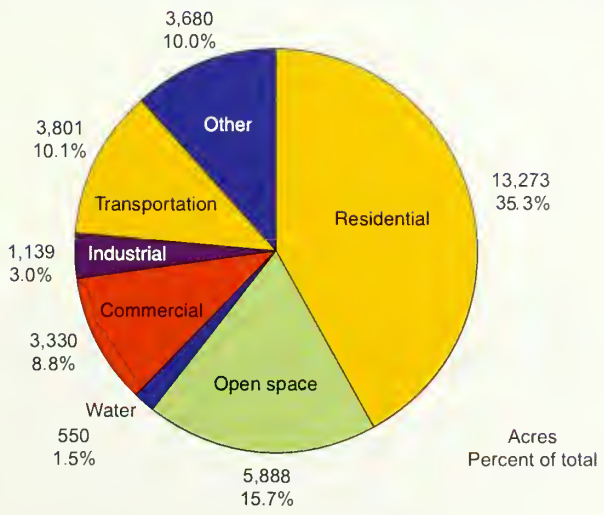
WHILE POPULATION HAS HELD RELATIVELY CONSTANT SINCE THE 1970S, CHANGES IN REGIONAL LAND USE PATTERNS AND AN INCREASE IN THE TOTAL NUMBER OF HOUSEHOLDS INDICATE SUBURBAN SPRAWL.

Change in land use in Metro-Boston, 1970–1990



Source: Boston MPO Transportation Plan 2000–2005: Existing Conditions, Metropolitan area Planning Council

Land use distribution in Boston, 1998



Source: Boston Redevelopment Authority

What does this mean?

From 1970 to 1990, area under agricultural, forest, and open space use decreased by approximately 76 square miles while lands in residential, commercial, industrial and transportation use increased in the Metro-Boston region. Most of this development occurred in the residential land use sector, which grew by 61 square miles on land that was once forested. This is of particular concern since the regional population held relatively steady during this period, at about 2.9 to 3.0 million. An increase in the number of households during this period indicates a change in family size and family type, with households living on larger lots and in larger homes, using up more "house/land" per person than in the 1970s. The consequent "sprawl" has resulted in the loss of productive farm land, forests, and open space, while many urban areas that offer advantages of infrastructure, transportation access, labor, and industrial/commercial property are under-utilized. Sprawl contributes to longer commutes and environmental pollution, and increased infrastructure and maintenance costs. Sprawl is now affecting the health, quality of life, and the sense of place and character of Greater Boston and the New England region.

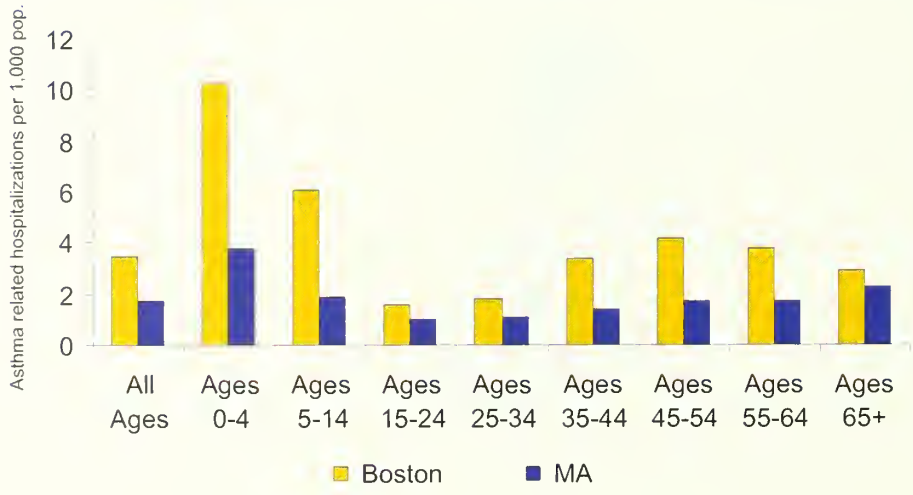
5.2 Clean Air

Each person breathes approximately 3,400 gallons of air per day. Without air, people cannot live. Unlike water, air cannot easily be bottled and purchased. The quality of Boston's air is affected by local sources such as dry cleaners, gas stations, and auto body paint shops; by mobile sources such as cars, trucks, buses, and airplanes; by point sources such as chemical plants; and by distant sources such as power generation facilities in the Ohio Valley and vehicles traveling in the Washington-New York-Boston corridor.

Good air quality days

ACCORDING TO A 1997 EPA REPORT FOR NEW ENGLAND, THE NUMBER OF "GOOD" AIR-QUALITY DAYS IN SUFFOLK COUNTY DOUBLED FROM ABOUT 150 IN 1985 TO 300 IN 1995. HOWEVER, WHILE BOSTON MEETS THE FEDERAL STANDARDS FOR ALL POLLUTANTS, ASTHMA RATES AMONG CHILDREN HAVE INCREASED.

Asthma hospitalization rates by age: Boston vs. Massachusetts, 1994–1997

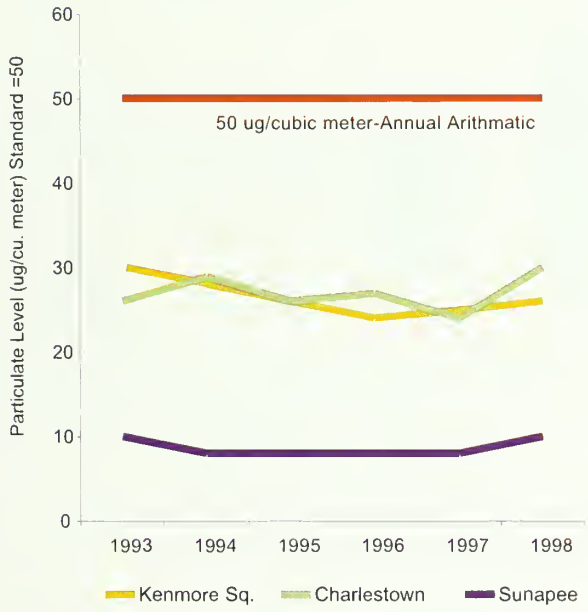


Source: Boston Public Health Commission

Particulate matter (PM – 10) data, 1998

Source: U.S. Environmental Protection Agency, Region 1 New England

Federal clean air standard (Sunapee, N.E. Region*) vs. Boston, 1993–1998



Source: U.S. Environmental Protection Agency, Region 1 New England

* Note: The air quality in Sunapee, New Hampshire is the standard against which U.S. EPA measures clean air in the New England Region.

What does this mean?

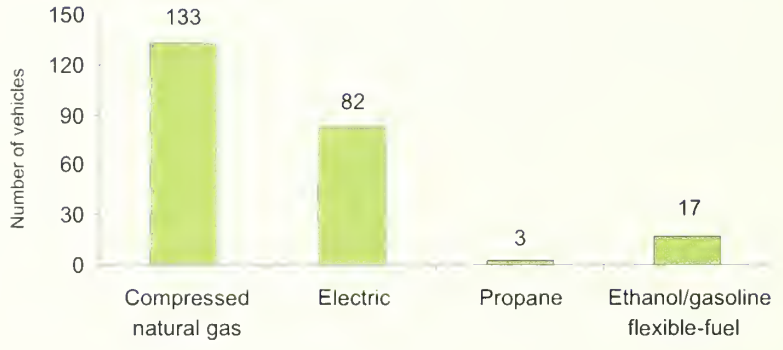
Good air quality days are defined as days when measured air pollutants are 50% (or less) of the National Ambient Air Quality Standards. EPA data and the Pollutant Standards Index used in a 1999 Scorecard report published by the Environmental Defense Fund (EDF) show that Suffolk County had 83 days with "good air quality" and zero days with "unhealthy air quality." Air quality was determined by measuring five criteria air pollutants, particulate matter (PM-10), sulfur dioxide, carbon monoxide, nitrogen dioxide, and ozone). Boston met Federal standards is for all of these basic pollutants. Despite these findings, the EDF scorecard states that 663,906 people in Suffolk County face an air-cancers-related risk that is 100 times the goal set by the Clean Air Act; 79% of this risk is from "mobile" sources, 11% from "area" sources, and 10% from "point" sources.

Air quality-related illnesses such as asthma and lung cancers are on the increase in Boston. Asthma rates are highest for children ages 0–4, followed by children ages 5–14, which points to a rise in this environmentally related illness. Additionally, recent studies have linked the inhalation of very fine particles to respiratory problems. Particulates are tiny airborne particles or aerosols such as dust, dirt, smoke, and liquid drops. They result from fossil-fuel combustion emissions, industrial process emissions, and motor vehicles. Because of their small size, particles can be inhaled, and, over time, cause breathing and respiratory problems. Accordingly, the US EPA will soon be requiring the monitoring of very fine particles, or PM-2.5 data, as opposed to the currently monitored PM-10 data. Data for 1998 from the two Boston monitoring stations that are tracking larger particulate matter (PM-10), indicates that Boston is well within the PM-10 standard. Boston needs to keep track of PM-2.5 data to understand any public health consequences related to issues such as asthma, which, in addition to poor indoor air quality, may also be aggravated or caused by outdoor air pollution.

Number of vehicles using alternative fuels

THE MASSACHUSETTS STATE FLEET OPERATES 235 LOW-EMISSION ALTERNATIVE FUEL VEHICLES; 19 OUT OF 1,018 MBTA PUBLIC TRANSPORTATION BUSES USE CLEAN FUELS.

Low-emission state fleet vehicles by fuel type, 1999



Source: Metropolitan Planning Council, Boston 2000 Transportation Plan

What does this mean?

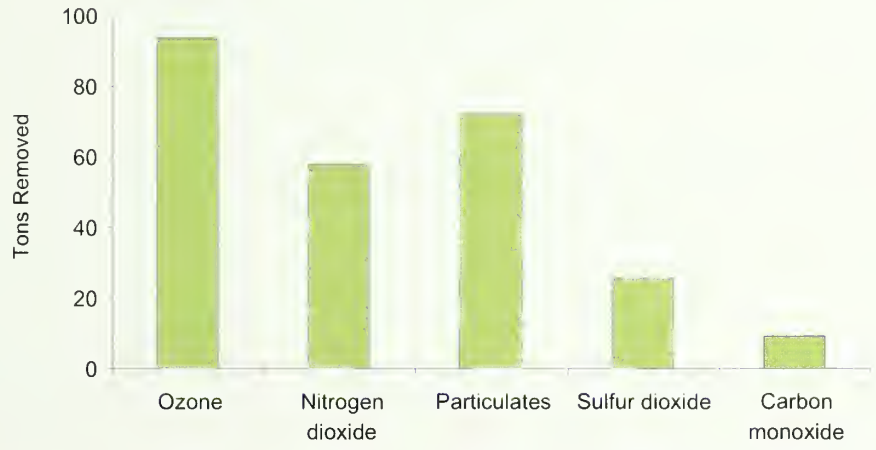
Most buses, trucks, and construction equipment vehicles use diesel as fuel. Diesel fuel produces soot that scientists call PM or particulate matter, and nitrogen oxides (NOx) that aid the destruction of the ozone layer. Diesel fuels produce about 10%–15% more PM 2.5 than compressed natural gas (CNG) vehicles and 30% more than automobiles using gasoline. Electric vehicles do not produce local emissions. Of the 235 alternative fuel vehicles in the Commonwealth's fleet, 133 run on compressed natural gas, 82 on electric power, 3 on propane, and 17 on ethanol/gasoline.

Environmental justice efforts in areas where public transit options are limited and where rates of asthma and other respiratory illnesses are on the increase have prompted action closer examination of air quality data. In 1999, the State's Department of Environmental Protection placed one of five fine particulate (PM-2.5) monitors for the Boston area in Roxbury to study the impact of vehicular emissions, on the health of residents. Residents have also demanded the use of clean fuels in public transport fleets in areas that depend heavily on buses. An August 2000 consent order entered into by the State's Executive Office of Transportation and Construction and the Executive Office of Environmental Affairs mandates the purchase of 358 new clean-fuel buses by 2004.

Metric tons of pollutants removed by trees in Boston

AN ESTIMATED 259 METRIC TONS OF POLLUTION WERE REMOVED BY TREES IN THE 125-SQUARE-MILE BOSTON AREA DURING DRY PERIODS IN 1997.

Tons of pollution removed by type, 1997



Source: Department of Environmental Management and USDA's Forest Service

What does this mean?

Trees cleanse the air by absorbing carbon compounds from traffic exhaust and by providing oxygen. Data from a 1997 unpublished report by the USDA Forest Service's Northeastern Forest Experiment Station indicates that an estimated 259 tons of pollution are removed by trees in the Boston region during dry periods.

5.3 Clean Water

Boston's identity as a city on the water's edge offers tremendous potential for improving the quality of life in the city. Boston's harbor and its rivers are sources of food, recreation and economic opportunities. Because activities on land eventually affect the waterways, the health of Boston's waters can be used to gauge the health of particular neighborhoods or of the region as a whole. Clean drinking water remains an important issue, requiring constant vigilance to protect it from bacteria, other contaminants, and metals — from the reservoirs all the way to the taps in people's homes.

Swimmability and fishability of Boston's waterways

Cleanliness of Boston Harbor

EIGHT MILES OF RECREATIONAL BEACHES ALONG BOSTON HARBOR ARE SWIMMABLE ON ALL BUT A FEW DAYS EACH SUMMER.

Source: Massachusetts Water Resources Authority

What does this mean?

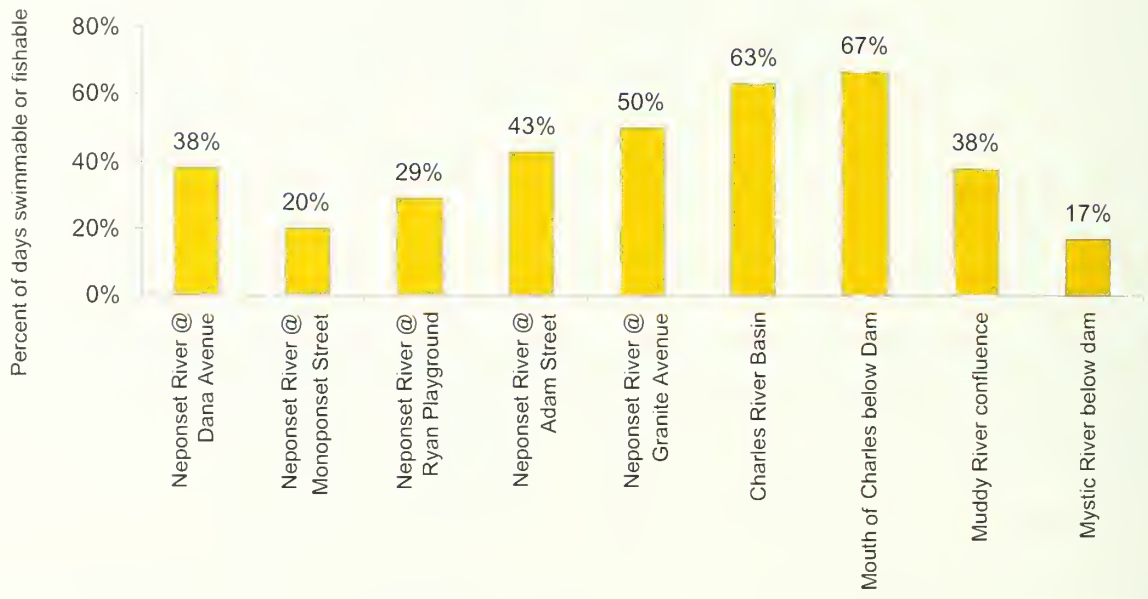
Less than a decade ago, Boston Harbor was considered one of the nation's dirtiest. Today, eight miles of recreational beaches along Boston Harbor are swimmable on all but a few days each summer as a result of a decade-long, $4.5 billion cleanup. Harbor porpoises and seals now swim in the Inner Harbor

in the spring and fall. The state's largest herring runs now contain more than 200,000 fish annually, double the estimates from the 1970s. Commercial lobster and shellfish harvests are valued at more than $10 million annually. With cleaner water, Boston's long-neglected waterfront is now sought after for development.

Cleanliness of Boston's rivers

AT THE 11 RIVER TESTING SITES IN BOSTON, THE NUMBER OF FISHABLE AND SWIMMABLE DAYS RANGE FROM LESS THAN THREE MONTHS TO FIVE AND A HALF MONTHS A YEAR.

Fishability and swimmability of Boston rivers, 1997



Source: MA Division of Fisheries and Wildlife, Riverways Program

What does this mean?

States use bacterial indicators to determine whether rivers are safe for swimming and drinking. In Massachusetts, fecal-coliform bacteria was chosen as a test for the presence of sewage. High levels of fecal-coliform bacteria often indicate the presence of sewage-borne viruses in the water which may pose a health risk to swimmers and fish. Sources of sewage pollution include sewer and storm water overflows, which carry with them raw sewage, animal feces, and oil and contaminants from street run-off.

Data gathered at specific points along the river shown in the chart indicate the level of cleanliness/ pollution found at that location. This may be due to the location of sewer outfalls for stormwater runoff during the rainy season. Stormwater continues to have a significant adverse impact on rivers and the harbor. For example, in 1997, the Charles River met the boating standard in dry weather (defined as three days without rain) for 87% of the year, as contrasted with only 61% of the time in wet weather. Because of the disparity in conditions in dry versus wet weather, the City and the Massachusetts Water Resources Authority are working to separate sanitary and storm sewers.

Swimmability and boatability of the Charles River

SWIMMABILITY AND BOATABILITY OF THE CHARLES RIVER CONTINUES TO INCREASE IN BOTH WET AND DRY CONDITIONS.

Swimmability and boatability of Charles River 1995–1998

	1995	1996	1997	1998
OVERALL				
Boating	39%	57%	70%	83%
Swimming	19%	21%	34%	51%
DRY WEATHER				
Boating	–	94%	87%	98%
Swimming	–	40%	56%	85%
WET WEATHER				
Boating	–	45%	61%	74%
Swimming	–	15%	22%	31%

Source:Open Letter to New England, from John P.DeVillars, EPA's New England Administrator
Five Year Report 1994—1999

What does this mean?

The effort to make the Charles River fishable and swimmable by the year 2005 was started in 1995 by the US-EPA New England Region in partnership with community and environmental groups, cities and towns, businesses, universities and other public agencies. Using regulations and collaborative initiatives, the effort focused on eliminating combined sewer overflows, illegal sewage and dumping, and storm water run-off. Data from the US-EPA shows that in 1998, during dry weather, the Lower Charles was swimmable 85% of the time and met boating standards 98% of the time. The number of swimmable (200 parts per million or less of fecal coliform bacteria) and boatable (1,000 parts per million or less) days overall doubled from 1995 to 1998.

Drinking water quality

BOSTON HAS HIGH QUALITY DRINKING WATER AT THE SOURCE. OLD INFRASTRUCTURE CAN CAUSE SOME PROBLEMS. SINCE 1992 THE BOSTON WATER & SEWER COMMISSION HAS UPGRADED 150 MILES OF WATER MAINS.

Loss of drinking water due to leakage in water supply infrastructure, 1980–1998

Source: Boston Water and Sewer Commission

What does this mean?

Boston gets its drinking water from the Quabbin Reservoir, which supplies us with safe water that has almost no lead or copper. The Massachusetts Water Resources Authority tests the water supply for over 122 contaminants. In 1998 only 9 of the 122 contaminants tested for were found in the water. The quality of Boston's drinking water is, however, affected by the water supply infrastructure, much of which is over 100 years old, deteriorated, and contains lead pipes — particularly at the connections between mains and buildings. The Boston Water and Sewer Commission has undertaken to upgrade much of the system and is committed to replacing all pipes more than 100 years old by the year 2010. An indicator of the results of this infrastructure improvement is the decline in unaccounted-for water, which addresses the loss of water due to leakage, and also prevents bacteria from entering the water supply. From 1980 to 1998, the loss of total water that Boston buys, dropped from 33% to 13%, with a corresponding reduction in loss from 50 million gallons of water per day to 11 million gallons.

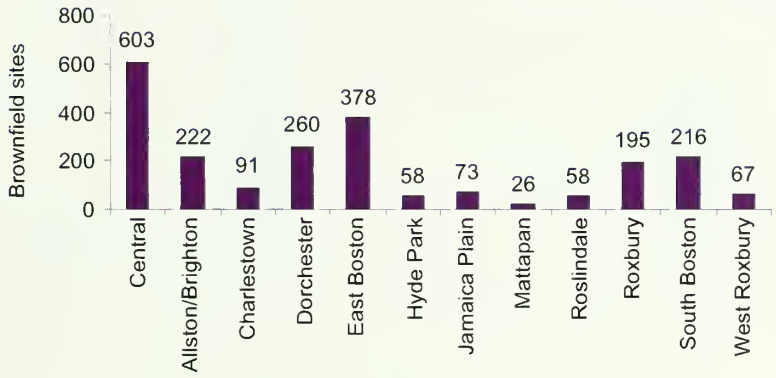
5.4 Clean, Useable Land

Over the past few decades, suburban sprawl and the availability of eheap, undeveloped land has led to the abandonment of commereial and industrial property, leaving behind eontaminated land in inner city areas. This problem was augmented by stringent regulations regarding the elean-up of soil, liabilities assoeiated with the ownership of eontaminated properties, and the reluctance of funding entities to lend for development on these properties, termed "brownfields." However, reeent awareness about the seale of this problem, its impact on the eeonomy and quality of life of eities, and concerns about sprawl have brought about the redevelopment of brownfields for a range of produetive uses sueh as businesses, sehools and parks.

Number of brownfield sites by Boston neighborhood vs. number restored

BOSTON HAD 2,247 BROWNFIELD SITES IN 1999. REUSE DATA NOT AVAILABLE AT THIS TIME.

Number of brownfield sites by Boston neighborhood, 1999



Source: MA Department of Environmental Protection

What does this mean?

Brownfields are vaeant lots or undeveloped pareels of land eontaminated by toxic chemicals left in the ground from previous uses. Once cleaned up, they ean be safely reused. A deerease in the number of reported eontaminated sites is also an indicator of neighborhood, eity and state eollaboration, and is often the result of development, as opposed to a mere clean-up. Neighborhoods with existing or former industrial land uses sueh as East Boston, Dorehester, Roxbury and Allston/Brighton tend to have the largest coneentration of eontaminated sites. Most of the Boston sites list "oil" as the eontaminant, probably from leaky underground tanks.

Boston's total of approximately 2,247 brownfield sites eompares with a state total of 16,907 reported since the state eleanup program began in the mid 1980s. In an analysis done in 1998, the state listed 10,557 sites as having been eleaned up, with 6,350 still to be cleaned. Currently, exact data is not available on the number of sites eleaned up in Boston.

5.5 Healthy Ecosystems

Nature has a way of healing itself. It provides natural processes for the environment to stay in balance and provides us with clean air, clean water, and fertile soils. Natural processes maintain the health of an ecosystem, allowing for the existence of many species and the micro-environments within which they can survive. A healthy ecosystem has a diversity of plant, animal, bird and insect species. The loss of species often indicates the loss of their natural habitat or imbalances that upset the normal functions of an ecosystem. For instance, large amounts of pollutants and contaminants, out of proportion with the healing capacity of natural systems, can weaken the health of an ecosystem and lead to the loss of species and habitats, as well as to negative impacts on the health of humans.

Acres of protected or restored wetlands

THERE ARE 5,180,158 SQUARE FEET (APPROXIMATELY 100 ACRES) OF COASTAL AND INLAND WETLANDS IN BOSTON SUBJECT TO THE MASSACHUSETTS WETLANDS PROTECTION ACT.

Acres of wetlands by Boston neighborhood, 1998

Neighborhood	Acres
Allston Brighton	2.64
Back Bay	7.02
East Boston	78.08
Fenway Kenmore	0.03
Hyde Park	0.43
Mattapan	0.50
Roslindale	0.25
Roxbury	0.15
South Dorchester	0.11
West Roxbury	29.70

Source: Boston Conservation Commission

What does this mean?

Wetlands are good indicators of the health of an ecosystem because they are natural water filters, guard against floods by absorbing and storing river overflow, and provide habitat for wildlife. Boston is built on an estuary, and much of the city we see today is actually built on filled-in wetlands. Wetlands, categorized either as "flats," "pond-wetland," "marsh-wetland," or "marsh-salt" are found in 10 Boston's neighborhoods — Allston/Brighton, Back Bay, East Boston, Fenway/Kenmore, Hyde Park, Mattapan, Roslindale, Roxbury, South Dorchester, and West Roxbury. According to the Boston Conservation Commission, there has been no significant filling of wetlands since the Wetlands Protection Act of 1972.

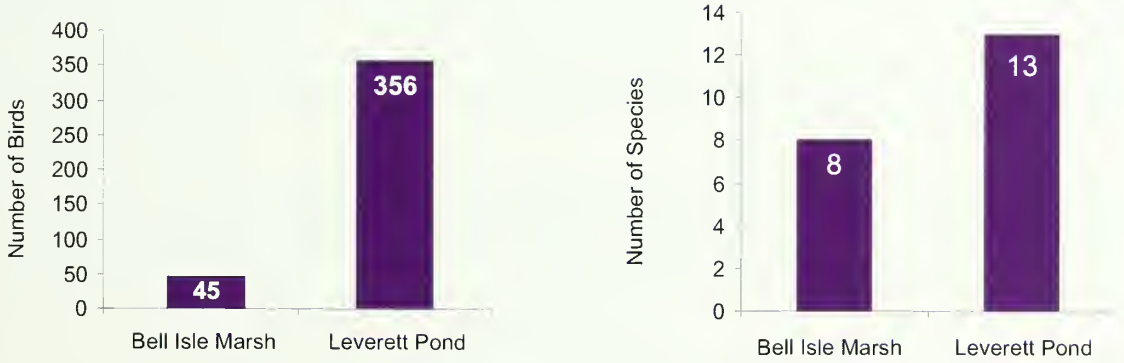
Bio-diversity

Boston, with its harbor, islands, rivers, ponds, waterfront, parks, and myriad structures provides a wide range of habitats for living creatures. The richness or bio-diversity of these resources is evident in the number and variety of species of birds, fish, mammals, marine life, insects, and other creatures in Boston. Estuaries, for example, provide habitats for many species, which also translates into economic, scenic, educational, recreational, and aesthetic value to humans. The balanced diversity of wildlife, marine, and insect species reveals the nature and health of their habitats.

Number and volume of bird species in Boston

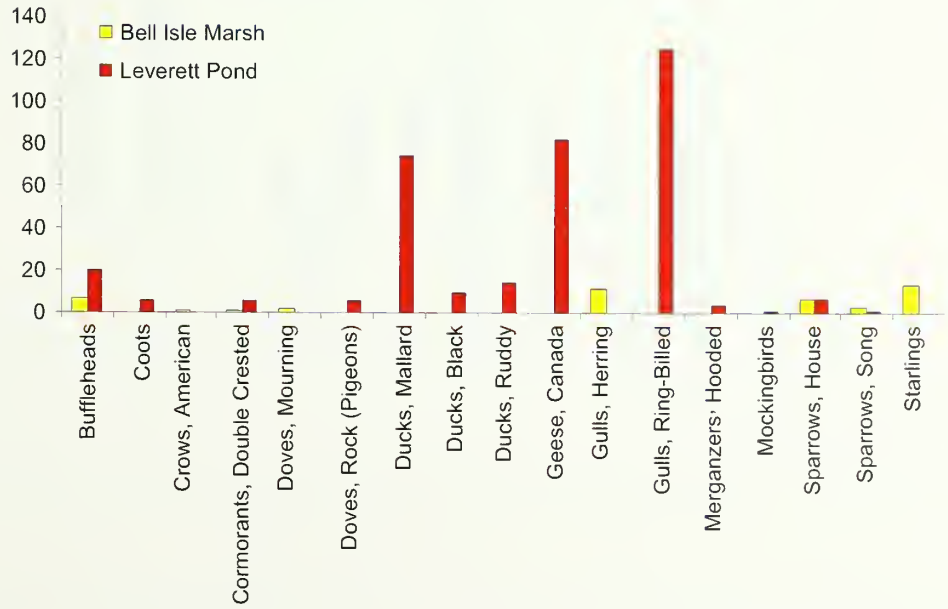
TWO SITES MONITORED ON A SINGLE DAY SHOWED 401 BIRDS FROM 21 SPECIES AT THE BELL ISLE MARSH AND LEVERETT POND IN BOSTON.

Number of birds and number of species sighted in one day at Bell Isle Marsh and Leverett Pond, 1999



Source: Boston College, The Watershed Institute, 1999

Single-day bird census, 1999



Source: The Watershed Institute, Boston College

What does this mean?

Birds and people coexist in every urban ecosystem. Because birds rely on so many facets of natural landforms, birds as a group are very sensitive to habitat alteration and destruction. Community groups and students are now measuring the presence of birds in various natural communities in Boston. The data gathered will be used to create an accurate picture of species richness (total number of different species). Over time, a baseline understanding will be established from which subsequent habitat improvement or degradation can be measured.

A comparison of one day's bird data gathered by two high schools in the Boston area gives a sense of the value of regular monitoring of the Boston ecosystem. The Watershed Institute at Boston College has been working with high schools in the Greater Boston area to gather data since early 1999. East Boston High School students regularly conduct their studies at Bell Isle Marsh at the edge of Logan Airport throughout the school year while South Boston High School students research Leverett Pond on the Muddy River. Bell Isle Marsh is primarily a salt marsh estuary while Leverett Pond is a fresh-water habitat. The data presented above shows the total number of birds observed at each site on the same day, and provides detailed information about these bird populations, displaying species occurrence and composition. These data indicate that sufficient variation exists between these study sites to be useful indicators of bio-diversity. While the presence or absence of a single bird species cannot diagnose the health of an ecosystem, the distribution of birds reflects conditions at each site. The assemblage of species at a given site mirrors the availability of food sources and the existence of specific environmental pressures within a habitat.

Number of Peregrine falcon fledglings sighted in Boston

BETWEEN 1988 AND 1998, 37 PEREGRINE FALCON FLEDGLINGS WERE SIGHTED IN BOSTON, BACK FROM NEAR EXTINCTION IN THE 1950S.

Peregrine falcons fledged in Boston: 1988–1999

Source: Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program

What does this mean?

Endangered species such as the Peregrine falcon can survive in cities. Likening tall buildings to cliffs, they use artificial nests atop buildings such as Boston's Custom House.

The Peregrine falcon, though found on all continents except Antarctica, substantially declined in number due primarily to the effects of the pesticide DDT. The last breeding pair in Massachusetts was

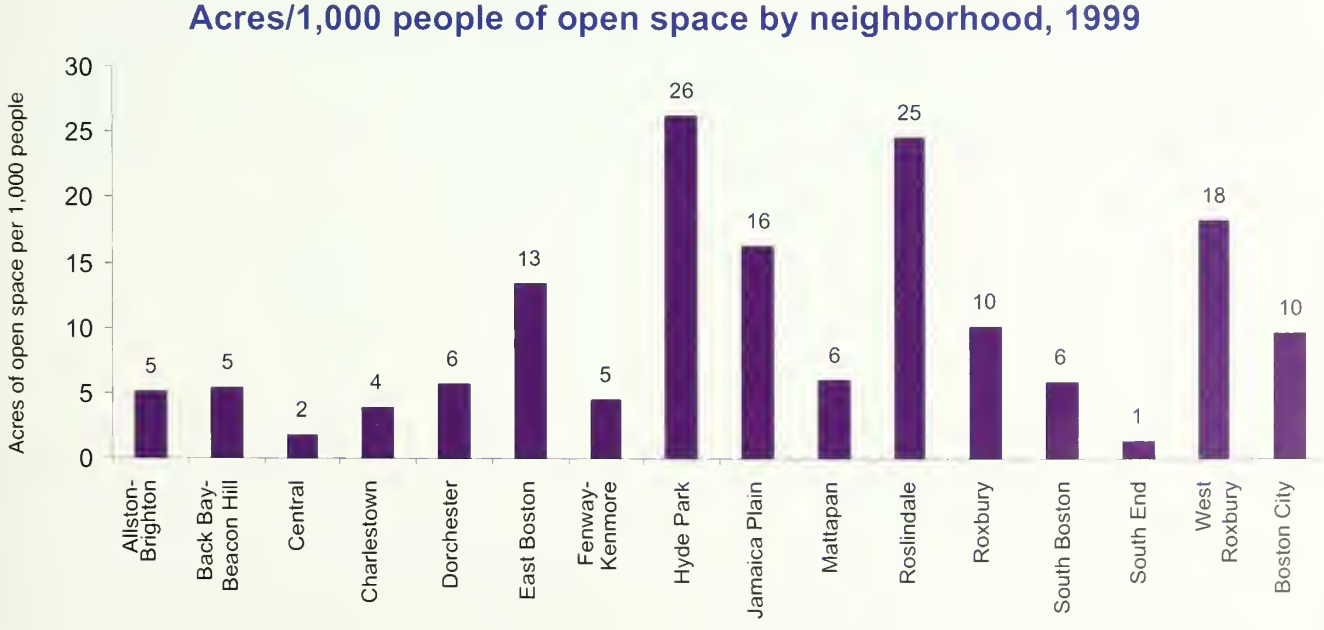
seen in 1955. Reintroduction efforts began in 1975 and resulted in the establishment of over 80 breeding pairs in the Eastern United States by the end of 1990. There are currently four breeding sites in Massachusetts, two of which are in Boston. Captive-bred Peregrine falcons were released in Boston in 1984 and 1985. The fluctuations in sightings seem to be due to natural causes. For example, in 1996 a nest site was flooded by Hurricane Bertha.

5.6 Attractive Green and Recreational Spaces

A large part of Boston's charm as a livable, walkable city is the quality and maintenance of its parks and open spaces. The Emerald Necklace park system, beaches, sitting parks, playing fields, tot lots, community gardens, the Boston Common, the Public Garden and the newly emerging harborfront all add to the quality of our lives. Given Boston's density of 11,860 persons per square mile, every acre of public open space serves multiple purposes. Open spaces provide recreation, habitat for wildlife, space for trees that cool and clean the air, flood control storage, water filtration, food, and scenic beauty. Green areas can make a neighborhood more neighborly and therefore more safe, ensure a balance of development and "elbow-room", enhance the value of real estate, and inspire us with the beauty of nature.

Acres per 1,000 residents of community gardens, parks, and urban wilds by neighborhood

BOSTON HAS 9.6 ACRES PER 1,000 PEOPLE OF PUBLIC OPEN SPACE. BOSTON'S OPEN SPACE DISTRIBUTION VARIES FROM A LOW OF 0.6 ACRES PER 1,000 PERSONS IN CHINATOWN AND 1.4 ACRES PER 1,000 PERSONS IN THE SOUTH END TO 26.3 ACRES PER 1,000 PERSONS IN HYDE PARK.



Source: Boston Parks & Recreation Department

What does this mean?

The City of Boston contains 5,518 acres of open space including 3,251 acres of parks, playgrounds, squares and outdoor malls, 1,374 acres of "urban wilds," and 62 acres of community gardens. For its approximately 574,000 people, this translates into approximately 9.6 acres per 1,000 persons. This ratio is consistent with the recommended national standard of 10 acres of public open space per 1,000 persons for urban areas, and assures a healthy environment and a high quality of life for Boston. However Boston's population is expected to increase and the current distribution of open space varies greatly by neighborhood.

Miles of improved and accessible Harborwalk

BOSTON'S 43.5 MILES OF HARBORWALK EXTENDS NORTHWARD FROM THE BOSTON-MILTON BORDER TO THE BELLE ISLE SALT MARSH IN EAST BOSTON; APPROXIMATELY 25 MILES ARE NOW ACCESSIBLE TO THE PUBLIC.

Accessible Harborwalk is defined by the Boston Redevelopment Authority as any part of the harbor frontage (improved or unimproved) that is accessible to the public.

Boston's Environmental Assets. See map, facing page.

What does this mean?

The Environmental Assets map illustrates the city's public open spaces and the water frontage now open to the public along the Neponset River, the John F. Kennedy Library site and the University of Massachusetts, at various downtown wharves, and along beaches. However, other sites along the harbor are closed to the public by private developers, by Massport, which operates Logan Airport and nearby facilities, and by several private yacht clubs. The 1866, Massachusetts' Public Waterfront Act stated that the public has a right of access to historic tidelands below the historic high-water mark. Because of inconsistent enforcement of this law, public access is restricted in places. City and state government, nonprofit harbor-related organizations, and others are committed to increasing public access. They recognize that as Boston Harbor becomes cleaner, all residents and visitors alike, regardless of disability or age, deserve to benefit by walking, swimming, and picnicking along its shores.

Boston's Environmental Assets

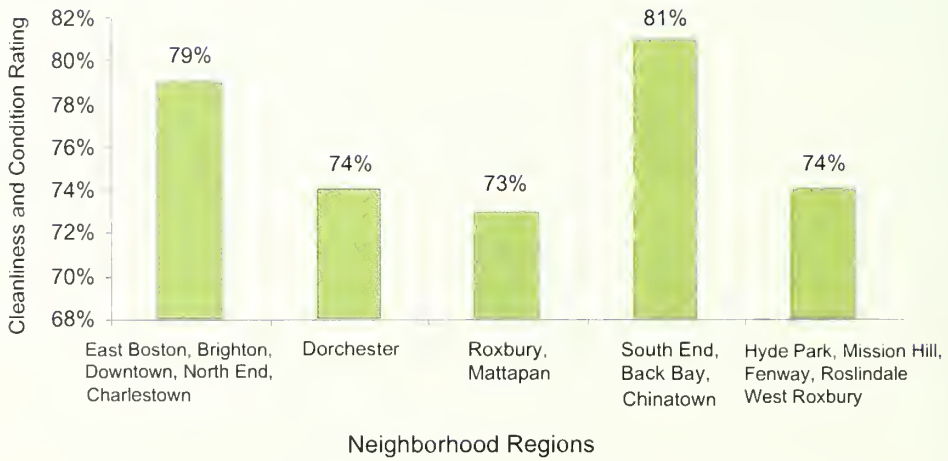
5.7 Beautiful Communities

Boston is a beautiful city. Its charming parks, historic buildings and monuments, residential architecture, public buildings, streets, squares and gardens offer an aesthetic quality that is pleasing both to residents and the many tourists who visit Boston. The city's aesthetic quality is a function of planning, maintenance, stewardship, and vigilance. A well-maintained public realm also indicates a well-functioning city government. The Boston Parks and Recreation Department oversees 2,200 acres of park land, including 215 parks and playgrounds, 65 squares, urban woodlands and street trees, three active cemeteries, 16 historic burial grounds, and two golf courses. Over the last 10 years, the Boston Parks and Recreation Department has implemented a $120 million rehabilitation of the city's park system, targeting every tot lot and the majority of ball fields and courts.

Cleanliness rating of streets and public parks by neighborhood

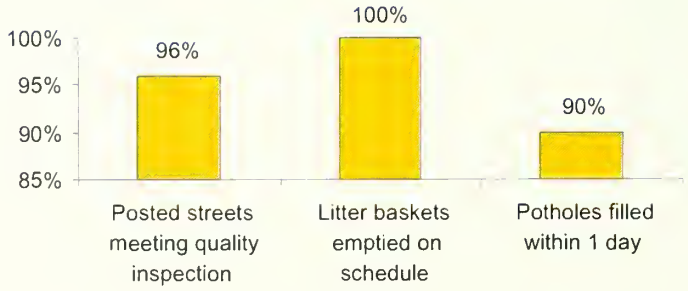
OVER 70% OF ALL PARKS AND IN BOSTON MEET QUALITY AND MAINTENANCE STANDARDS. OVER 96% OF POSTED STREETS ARE CLEANED.

Boston's park cleanliness and condition ratings, FY98



Source: Boston Parks & Recreation Department, Mayor's Management Report

Public Works cleanliness rating of streets, FY00



Data is from July 1999 through March 2000

Source: Department of Public Works

What does this mean?

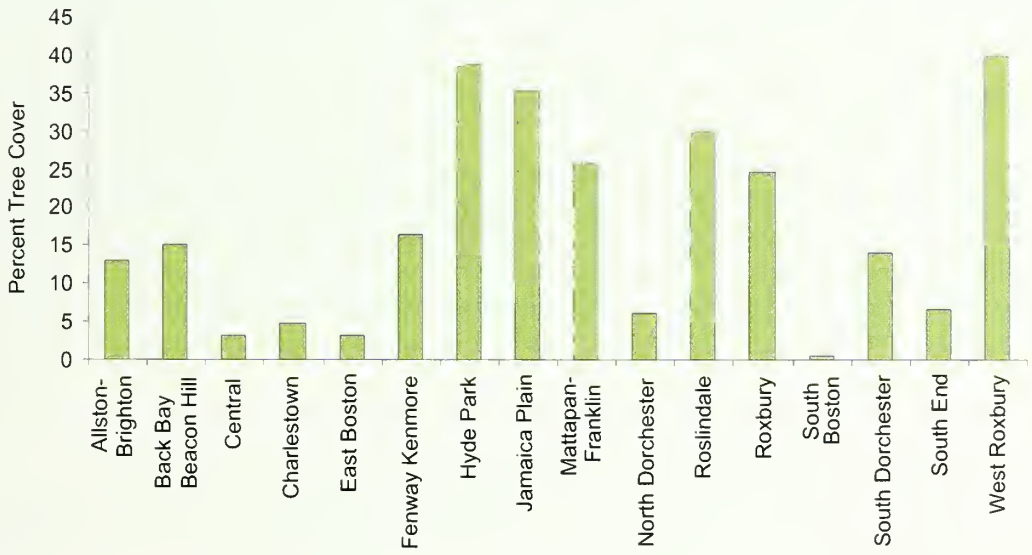
Streets, sidewalks, buildings, and parks are the building blocks of the urban landscape. When the public realm is attractive and in good condition — for all residents in all neighborhoods — people feel safer, have more civic pride, invest in their communities, and focus their attention on other civic concerns while enjoying a good quality of life.

According to a recent national report by the Trust for Public Land and Urban Land Institute, Boston was one of only three cities, with Minneapolis and Cincinnati, rated in 2000 as having a four-star park system. City streets in Boston, though keeping up with the maintenance schedules, require some attention, particularly from the months of November through April when no street cleaning is scheduled. Also, in the future, comparing rates of cleanliness across neighborhoods will help measure the degree of equity in the distribution of city resources and stewardship of the environment by residents.

Percentage of city under tree cover

OVER 21% OF BOSTON IS COVERED WITH TREES, ACCORDING TO THE U.S. FOREST SERVICE. THE EXTENT OF COVERAGE VARIES FROM A LOW OF 3% IN EAST BOSTON TO A HIGH OF ALMOST 40% IN WEST ROXBURY.

Percentage of neighborhood tree cover, 1997



Source: MA Department of Environmental Management & USDA's Forest Service

What does this mean?

Trees, especially in dense neighborhoods, give people a sense of place, comfort and beauty. From the grays of winter to the changing greens of spring and summer, to the reds, golds and purples of fall, trees provide color to the city. Trees can reduce energy consumption by up to 20% in the summer and up to 30% in the winter. Tree and shrub barriers can reduce noise levels by approximately one-half (in the range of 8–12 decibels). Wind speed, a problem in urban plazas, can be reduced by more than 30% by planting of rows of trees.

Noise complaints by neighborhood

NO DATA AVAILABLE FOR BOSTON AT THIS TIME.

What does this mean?

We do not usually think of noise as an environmental pollutant, yet it pervades every second of our lives in the city. The high noise level in Boston is attributed, in part, to Logan Airport, the greater density of streets and housing, and the high percentage of multi-unit dwellings. Today, the "Big Dig", the depression of the Central Artery, and construction of new hotels and office towers are also major sources of noise. A 1971 study conducted by the City's Pollution Control Commission in nine Boston neighborhoods showed that 86% of residents experienced some level of noise pollution, with at least 75% coming from motor vehicles, aircraft, and voices. A new analysis of noise pollution in Boston is needed. Noise can have physical effects such as raising blood pressure, increasing anxiety and contributing to hearing loss. Noise pollution also reduces productivity, civility, and a sense of place.

Number of bulbs/annuals and street trees per 1,000 persons planted by the Boston Parks and Recreation Department by neighborhood

500,000 DAFFODILS HAVE BEEN PLANTED BY THE BOSTON PARKS AND RECREATION DEPARTMENT SINCE 1994. IN 1997, 987 NEW STREET TREES WERE PLANTED AND 800 TRAFFIC ISLANDS WERE ADORNED WITH FLOWERS. IN 2000, 2,000 NEW STREET TREES WERE PLANTED TO CELEBRATE THE MILLENNIUM.

What does this mean?

Beautification of the public realm increases community pride and the pleasure of the changing seasons. Also, flowers are universally appreciated as a source of beauty. Since 1994, each year the Boston Parks and Recreation Department plants 100,000 bulbs in Boston or an equivalent of 200 bulbs per 1,000 persons per year and about 1,000 street trees annually. A total of 500,000 daffodils have been planted in parks and squares. Data regarding neighborhood distribution of these enhancements has not been tracked.

5.8 Environmental Responsibility and Stewardship

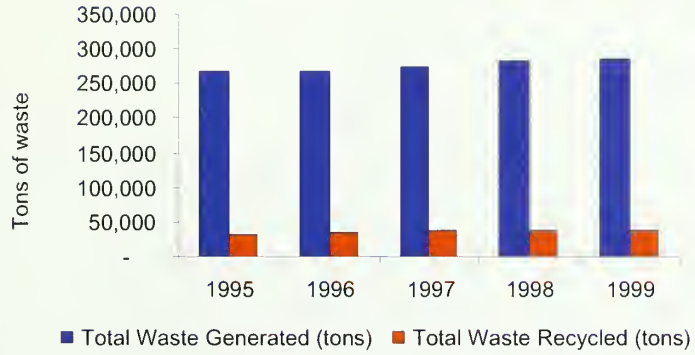
The White House Intergovernmental Panel on Climate Change reports that human activity is affecting the environment is serious ways, both locally and globally. Local impacts can be seen and felt in quality of life, environmental and public health terms, while globally we are seeing the increase of greenhouse gas emissions at a rate that is much faster than the ability of natural processes to remove them from the atmosphere. Global warming, which is a result of increased carbon dioxide (CO_2) and other greenhouse gas emissions, will affect many aspects of our lives as temperature changes affect storm intensity, rainfall and the supply of fresh water. Climate change can lead to negative impacts on the health of humans and other species, the vitality of our natural resources and the productivity of agriculture. While solutions require global collaboration, environmental responsibility and stewardship through individual and local action are also essential. Smarter use of our scarce natural resources and technical innovation can help us leave future generations the priceless legacy of a clean, green, and healthy world.

Also see Air Quality indicators above and in the Transportation section

Percent of household trash recycled

BOSTONIANS RECYCLE ONLY 13.59% OF THEIR HOUSEHOLD WASTE OUT OF A TOTAL OF 287,000 TONS. BOSTON RESIDENTS RECYCLE LESS THAN RESIDENTS OF OTHER MUNICIPALITIES.

Percent of household trash recycled, 1995–1999



Data Source: City of Boston Public Works Department, Recycling Program

What does this mean?

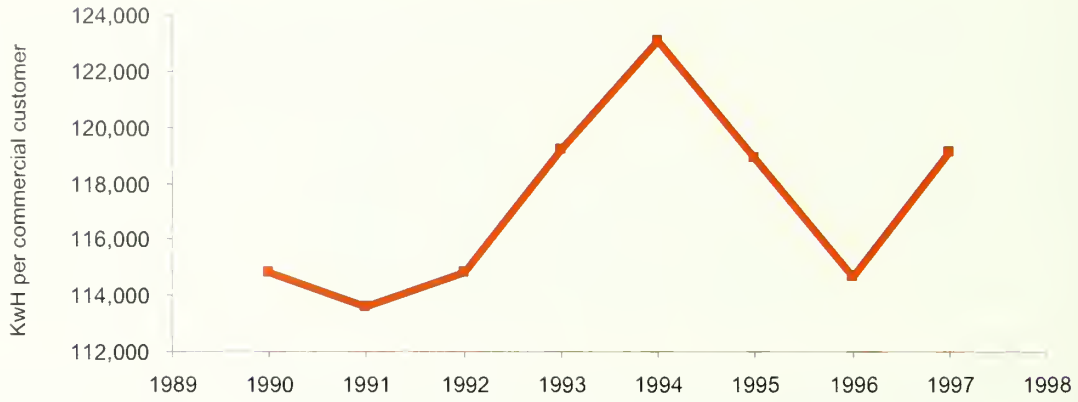
Participation in the Blue Bin and hazardous waste recycling programs is an effective way for Boston residents to demonstrate active concern and stewardship about the environment. In fiscal year 1999 (July 1998 to June 1999) Blue Bin (household) recycling increased from 15,000 tons to 17,000 tons, indicating increased outreach and citizen response. Since 1996, the introduction of paint, motor oil, television and computer recycling is keeping the more hazardous materials out of landfills. In 1998, Boston recycled 3,600 gallons of paint and redistributed 1,200 gallons for reuse to about 1,000 households citywide, while 2,000 gallons of motor oil were recycled. The City of Boston has just begun a program to recycle cathode ray tubes, a source of mercury found in televisions and computers. Products that can be repaired are serviced and sold by Goodwill Industries and the Salvation Army.

Though Boston's recycling rates continue to show marginal gains, it is important to note that Boston's total trash generated continues to increase. The current rate of recycling in Boston is behind that of other Massachusetts cities, including comparable cities such as Worcester. In the future, neighborhood recycling rates will provide a concrete measure of whether and where residents are becoming environmental stewards.

Energy usage by energy source, nationally and locally

ONLY LOCAL ELECTRICAL ENERGY USAGE DATA AVAILABLE AT THIS TIME.

Residential energy usage in Boston, 1989–1998



Source: Boston Edison, NStar Company

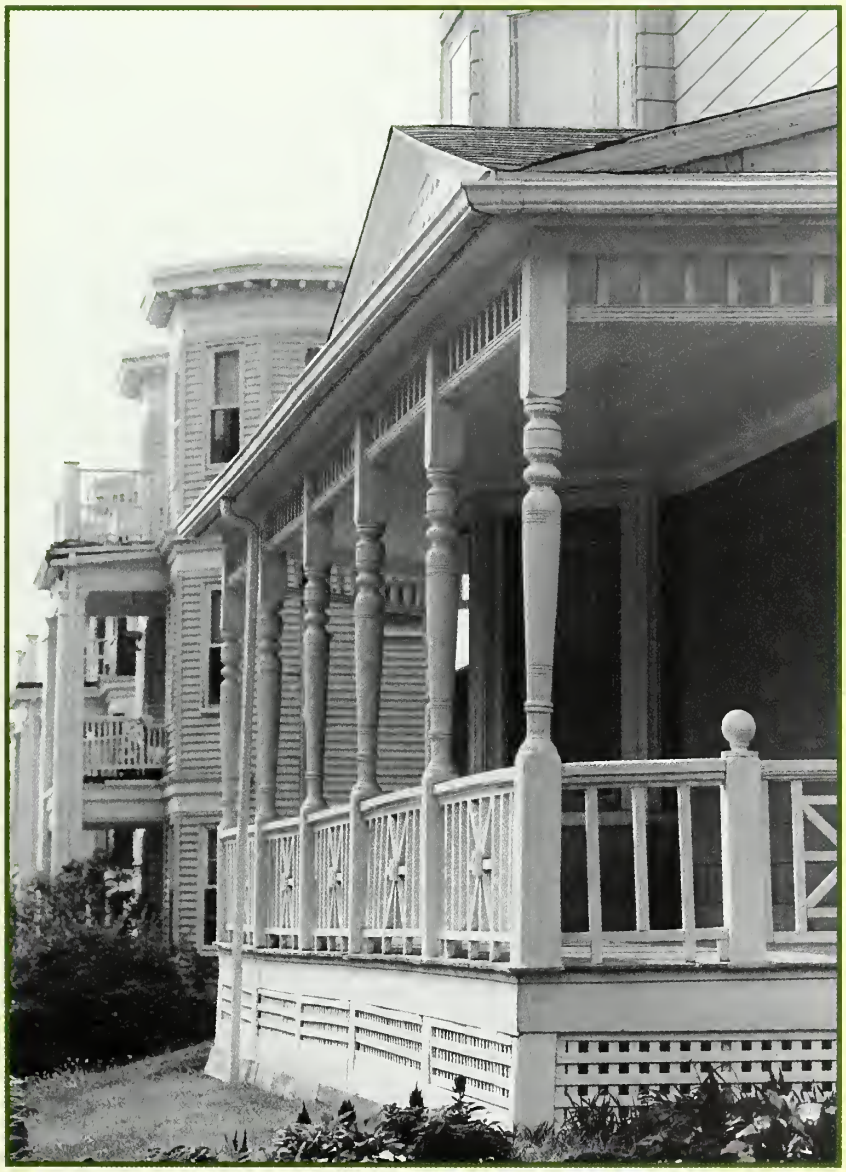
What does this mean?

The Union of Concerned Scientists reports that most of America's energy comes from fossil fuels — coal, oil, and natural gas — which, in 1996, accounted for 84% of U.S. fuel use: coal is the most common form of production for electricity; transportation fuels come from oil; and natural gas is the most commonly used winter heating fuel. The balance of the nation's fuel comes from nuclear and renewable sources, at about 8% each. Energy use in the U.S. is shared almost equally across three sectors: transportation, 26%; industrial, 38%; and residential and commercial, 36%. Energy consumption in all sectors stabilized in the 1970s and early 1980s due to the OPEC oil crisis in 1970. However, with increased domestic production, the cost of energy declined overall and energy usage increased dramatically, leading to growing concerns of global warming.

Increases in energy efficiency can be achieved through more energy-efficient appliances and fuel-efficient vehicles, green building technologies, the use of mass transit, reduction in consumption and waste, and increases in the production and use of renewable sources of energy like wind, water and the sun.

SECTION SIX

Housing



Vision

A community that offers housing choices to all economic classes, races, and groups with special needs, in stable neighborhoods that have convenient access to jobs, amenities and services.

Indicators of Adequate, High Quality Housing	Measures	How Is Boston Doing?
6.1 Adequate Supply	■ Regional and local population growth versus increase in the number of housing units, households, and employment	■ Growth in housing units has not kept pace with population, employment growth, changing lifestyles, or family types
	■ Neighborhood over-crowding index	■ Neighborhoods with large families and/or lower incomes show over-crowding
	■ Number of homeless persons in Boston	■ Boston's homeless population increased by 6.5% and homeless families increased by 9% from 1996 to1998
	■ Number of families on special needs housing list	■ From 1997–1999 waiting lists for public housing increased over 40%
6.2 Equitable Distribution of Affordable Housing	■ Number of Metro-Boston communities that meet the state's affordable housing goals	■ Only 8 of 101 Metro-Boston communities meet the state's goal; Boston well exceeds this goal
	■ Number of subsidized units by Boston neighborhoods	■ Data not available at this time
6.3 Housing Affordable to All Residents	■ Neighborhood housing affordability	■ From 1998–1999 rents for two and three bedroom apartments increased by 9%; median home sales prices increased by 12%
	■ Housing cost as a percentage of overall cost of living	■ Metro-Boston's high cost of living is largely driven by high housing costs
	■ Change in housing cost vs. change in income	■ In Metro-Boston housing costs are rising much faster than incomes
6.4 Safe and High Quality Homes	■ Number of permits for rehabilitation or new construction	■ Since 1992, almost 20% of Boston's housing stock has been rehabilitated or built new. Homeowners continue to invest in their homes
	■ Number of reported lead poisoning and asthma cases	■ Children in Roxbury and Dorchester face the greatest exposure to lead poisoning and asthma
6.5 Fair Housing	■ Access to mortgages by race and neighborhood	■ Disparities in access to home mortgages for blacks and Latinos is improving, but concerns remain
6.6 Neighborhood Stability	■ Number of in-movers and out-movers by neighborhood	■ Current data not available at this time
	■ Number of abandoned properties in Boston	■ Number of abandoned properties was down 40% from 1997 to 1998
	■ Number of mortgage foreclosures	■ Foreclosure resales were only 2% of all sales in 1999, down from 40% in 1992

Housing

The need for housing is constant, but the housing market is cyclical.

Historical context

Boston, like most American cities, experienced rapid change through an influx of new immigrants before World War I and an exodus of young families after World War II. Population loss, demographic change and disinvestment by banks and insurance companies continued in Boston through the 1960s. A dizzying combination of white flight, arson for profit and sporadic gentrification took place during the tumultuous early period of school desegregation in the 1970s, leaving many neighborhoods devastated by boarded-up buildings and thousands of vacant house lots. This era was followed by the boom economy of the mid-to-late 1980s, with sharply rising housing prices and rents. That bubble burst during a recession in the early 1990s, resulting in a spate of housing and business bankruptcies, neighborhood instability and growing concern about middle class flight. (In that recession, Massachusetts lost more than 375,000 jobs, nearly 12% of the state's employment base.)

In 2000, after nine years of economic expansion in Boston and the nation, many neighborhoods once fearful of crime and marred by abandoned housing and economic stagnation have been revitalized by residents, community development corporations, private developers, the public sector, and local banks.

With all of these changes, the number of housing units in Boston, about 250,000, has been remarkably constant for many years. With changing demographics and rising lifestyle expectations, the number of units that housed about 800,000 Boston residents in 1950 house fewer than 600,000 Bostonians today.

Today, with a hot economy, the loss of rent control and its discovery as a chic "24-hour city" by young professionals and aging boomers, Boston and its neighborhoods are experiencing surging real estate prices and a major affordable housing crisis.

Regional context

Rising home prices have made Greater Boston a very expensive place to live. The region's income advantage has now been almost neutralized by increases in the cost of living— driven largely by housing prices. This underside to the region's prosperity means that many long-time residents and young families alike cannot afford to purchase or rent housing in their own community. High housing prices are also undermining the future growth of the economy by discouraging much-needed workers from staying or locating here. According to a 1998 report, "The Road Ahead," by MassINC. and the Heinz Foundation, the cost of living in Massachusetts is 14%–17% higher than in the rest of the country, with costs in Greater Boston being 38%–44% higher by some measures. About half of this difference is accounted for by the region's high housing costs. Massachusetts has the third highest housing costs in the country, ranking behind only Hawaii and California. Massachusetts' home prices have rose 233.8% between 1980 and 1997 compared to 111.7% nationally.

With passage of the 1994 ballot initiative banning rent control in Massachusetts, rental housing, the only option for people who cannot afford to buy, is fast becoming as expensive as home ownership.

Low-income tenants are now being displaced by escalating rents. Many low-income households are now being forced by their economic circumstances to relocate. Many are moving into either overcrowded housing or into aging industrial suburbs with a weak tax base, inadequate public transportation, and fewer jobs and services than in Boston or more affluent suburbs.

The regional housing crisis is caused in part by the fact that most of the region's affordable units are located in a very few communities. While state legislation encourages at least 10% affordable units in every municipality, only eight of Metro-Boston's 101 municipalities have complied, despite its having been a statewide goal for the past 30 years.

A 1998 study by the University of Massachusetts, "A Profile of Housing in Massachusetts,"

found that vacancy rates for both owner occupied housing and rental units are lower in Massachusetts than anywhere else in the country.

The state's waiting list for rental housing vouchers has risen to more than 500,000 households. Even those who do receive vouchers report difficulty finding housing in the current tight market.

The regional housing crisis has inspired a new wave of community organizing, advocacy and coalition building. Groups like the Greater Boston Interfaith Organization, the Massachusetts Affordable Housing Alliance, Citizens Housing and Planning Association, the Boston Archdiocese, Northeastern and other area universities, and the Metropolitan Affairs Coalition are all working to develop new housing strategies and new resources. Most housing advocates believe that solutions will have to involve both state and federal policies and resources.

Citywide context

Boston contains 48,579 units of affordable housing, a higher percentage — almost 20% — than any other municipality in Massachusetts. Nevertheless, the recent economic boom is putting severe pressure on these units because wages and housing supply are not keeping pace with rising costs and demand.

Today, many of Boston's 250,000 houses and apartments are occupied by single young professionals, students or childless households. Others are overcrowded with low-income families doubling and tripling up in response to rising housing costs. There is an insufficient supply of housing in general and an acute need for housing of all types except at the highest end of the market.

The housing crunch in Boston is creating affordability problems not only for the city's poor but for much of the middle class (defined here as households earning between $32,000 and $60,000). For example, in 1999, a computer programmer earning $63,000 per year could not afford the mortgage payment on a median priced home (at $1,625 per month) and could barely afford the median advertised asking rent for a two-bedroom apartment ($1,550 per month). In 1998, two-thirds of Boston's residents could not afford to buy a median-priced home ($157,225) or median-priced condominium ($162,250), and prices have risen dramatically since then.

If housing affordability is a serious issue for those earning $63,000 per year, it is becoming a crisis for those with substantially lower incomes. The city's housing units designated "affordable" through public ownership, subsidized mortgages and Section 8 project-based contracts provide some relief, but waiting lists are full for public housing and Section 8 vouchers. Boston's residential property vacancy rate is now at 1% and homelessness is rising, particularly among families with children.

Students are competing with families for scarce housing units. While more than 10,000 new dormitory beds have been created in Boston since 1990, only about 28,000 of Boston's 135,000 students live on campus. Area universities are initiating strategies to increase the supply of housing overall. Harvard recently made $20 million available in low-interest loans and $1 million in grants for housing. Northeastern is working with the Archdiocese of Boston and others to streamline residential development, Boston College now houses 76% of its undergraduates, and Boston University has met the goal of housing 75% of its undergraduates with the opening of a new dorm that will free up 300 apartments in Allston/Brighton.

The City of Boston is using its housing resources primarily to create and maintain affordable housing. The past decade saw an increase in new housing built on city-owned vacant land. Large parcels of vacant land in some sections of the city are now being developed. Private development of market-rate housing is also important to Boston's economic health. The City of Boston is promoting the construction or rehabilitation of new units affordable to people at all income levels in every neighborhood. The number of new-construction dwelling units permitted in Boston grew from 890 units in 1998 to 2,095 units in 1999. In 1999, the city also preserved 1,379 affordable units from conversion to market

e prices. More housing means lower prices. ilding new housing, reclaiming vacant lots l renovating abandoned buildings eases rket pressures while strengthening the phys- and social fabric of the neighborhoods.

e City of Boston increased the funding of ordable housing in 1999 by investing more n $26 million directly through tax incentives l through an inclusionary zoning executive er. The executive order requires developers of re than 10 units to build 10% of the units on- as affordable. For developers who choose to et the affordability requirement off-site, the centage is increased to 15% or a monetary tribution of $52,000 per unit.

re than 40% of the units in the city are in two, ee or four to six unit buildings. Just over 15% he stock is single-family housing or town- ses. Boston's home ownership rate, while low npared to other cities, reflects the fact that st owner-occupied houses in Boston contain tal units. Boston's housing stock, 70% of ich was built prior to 1939, is aging.

e City of Boston provides homeowners with a iety of rehabilitation assistance programs and toric rehabilitation programs to preserve and late the city's housing stock.

er the past five years, the City of Boston has de a concerted effort to increase home owner- p rates. Prospective home buyers can go to ston's Home Center, a centrally located one- p shop, for information or to sign up for ne-buying classes. In addition, Boston offers sses for new homeowners. Foreclosure sales a percentage of total residential sales in 1999 s 2% compared to 17% in 1994. Through se educational efforts and changes in private rtgage products and practices, Boston is over- ning a legacy of discriminatory lending prac- es. Boston's homebuyers are much more ially and ethnically diverse than in the past.

eighborhood focus

e hot housing market is forcing many low- ome residents to pay rents well beyond ir means. Boston's community development porations (CDCs), local funders and quasi-public organizations have helped to cushion the blow of high housing prices on low-income residents through loans, technical expertise, tenant associations and other assistance programs. Boston's CDCs have intensified collaboration on housing development efforts. Examples of their impact range from small to large rehabilitated properties, new neighborhoods of homes, and tenant-managed and tenant-owned developments. A major strength of housing in Boston is the high number (almost 30) of active CDCs throughout Boston's neighborhoods since the 1970s.

Boston's public housing has also been improved significantly since its nadir in the early 1980s, when it was put into court-ordered receivership. The Orchard Park and Mission Hill developments recently received more than $50 million in HOPE VI grants from HUD for comprehensive improvements and resident support and training. Most of Boston's federally-owned and state-owned public housing developments — more than 13,000 units — have been upgraded. However, racial tensions and hate crimes in some developments continue to undermine these efforts.

One advantage of the hot housing market is a decrease of abandoned buildings in the neighborhoods. The city has developed an aggressive campaign to reach out to owners and encourage them to repair their properties or sell them. In the early 1970s, Boston had several thousand vacant buildings. A survey by the City's Department of Neighborhood Development in 1999 identified 426 abandoned residential properties, a 56% decline since 1997.

Remaining challenges

- **The single biggest housing challenge is the lack of sufficient resources to meet demand. The state's housing budget was cut by 37% over the past decade—from $220 million in 1990 to $137.5 million in early 2000. Over the same period, the state's budget increased by 55%.** The federal housing budget has also been reduced. Increased investment in housing by the state and federal government is crucial.

- **Massachusetts' housing crisis cannot be solved without shared responsibility.** Municipalities with available land and little to no affordable housing must be prepared to contribute to the regional supply of affordable and other housing to ensure that a variety of housing stock, prices, and ownership types are available. This is also an opportunity to plan for the future and invest in smart-growth strategies emphasizing high quality, high-density housing at regional transit nodes.

- **Without rent control, students from Boston's colleges are competing with families for off-campus rental housing and are driving up costs.** Students, with two, three, four and more people contributing to one rent are making it more attractive for landlords to rent to them than to households with one or two wage earners. According to a recent study by the Boston Redevelopment Authority, of Boston's 135,480 students in 1998, only 27,435 were housed in dorm rooms. To address this, colleges must build twice as many dorm rooms as planned over the next five years, according to a recent study by Northeastern University's Center for Urban and Regional Policy (CURP) commissioned by the Boston Archdiocese.

- **Compounding the affordability problem in Boston's neighborhoods, many of which contain a number of subsidized housing developments, is the fact that project-based mortgage subsidies and Section 8 certificates are expiring.** The booming economy and housing market make the conversion of affordable units into market rate units an attractive option for owners. Many owners have pre-paid their subsidized mortgages, thereby ending rent control for affected units. To date, 890 previously subsidized units have been converted to market rate housing but another 1,798 units are at risk. Earlier changes in U.S. tax law, reduced subsidies for housing production, and the reluctance of capital markets to finance large projects have contributed to a decline in multi-family housing production and in long-term maintenance.

- **Two-year time limits for benefits for families with dependent children receiving public assistance in Boston and the subsequent loss of benefits, which began in 1998, makes it impossible for some families to pay their previously affordable rent.** This puts new strains on both tenants and owners, including many of Boston's CDCs, the Boston Housing Authority and other low-income housing developers.

- **An increase in the supply of special needs housing is also necessary to meet demand.**

Housing Indicators

6.1 Adequate Housing Supply

Boston's housing needs are as diverse as its population. The impact of the booming economy, demographic changes and changes in household and family structure challenge us not only to keep up with the demand for high quality housing but also to ensure that the available housing stock meets the needs of the changing population and of those with special needs. Boston's large population of single-parent households, a significant student population, young, working, non-traditional households, and the influx of immigrant populations (who typically have a higher number of persons per household than the traditional American household), and people with disabilities, will continue to intensify the demand for additional housing at various sizes and price ranges.

Regional and local population growth versus the increase in housing units, number of households, and employment

GROWTH IN HOUSING UNITS IN METRO-BOSTON HAS NOT KEPT PACE WITH POPULATION, EMPLOYMENT GROWTH, CHANGING LIFESTYLES, AND FAMILY TYPES.

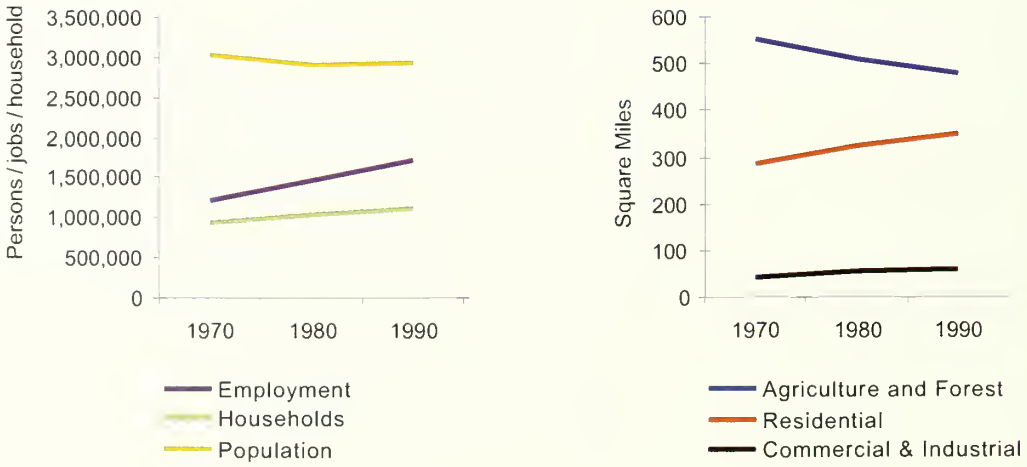
SINCE THE EARLY 1990S, 55,566 NEW UNITS WERE ADDED TO THE APPROXIMATELY 1.4 MILLION HOUSING UNITS IN METRO-BOSTON (EXCLUDING BOSTON).

Source: Metropolitan Area Planning Council

IN BOSTON, BETWEEN 1992 AND 1999, 3,172 PERMITS FOR NEW RESIDENTIAL CONSTRUCTION WERE ISSUED.

Source: Boston Redevelopment Authority

Metro-Boston population growth vs. increase in number of households, 1970–1990



Source: Boston MPO Transportation Plan 2000-2025: Existing Conditions, Metropolitan Area Planning Council

What does this mean?

During the last couple of decades, the Metro-Boston population has held relatively steady at about 2.9 to 3.0 million people, while the number of households and jobs have increased, indicating changing lifestyles and family types. Boston's population decreased from 801,444 in 1950 to 574,283 in 1990,

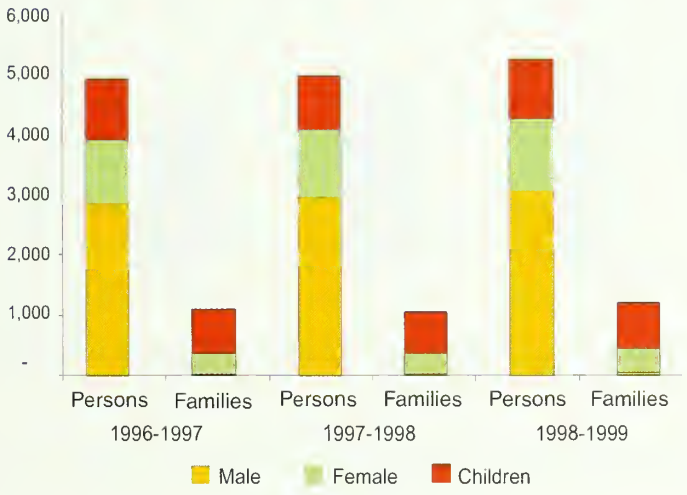
while the number of households held relatively steady at about 250,000, also indicating a shift in lifestyles and household types.

The rapid rise in the cost of housing is due to demand far outpacing the supply of new housing. Since the recession of the early 1990s, 55,566 new units were added to the approximately 1.4 million housing units in Metro-Boston (excluding Boston) for a 4% gain. During this period, however, approximately 300,000 jobs were created in the area, for a 6.4% gain. In Boston, since the end of the recession in 1992, more than 113,000 jobs have been created, yet only 3,172 permits for new residential construction were issued. In other words, while employment was growing at 2.6% annually, the number of housing units was growing at only slightly more than 0.1% per year.

Number of homeless persons and homeless families in Boston

BOSTON'S HOMELESS POPULATION INCREASED BY 6.5% AND HOMELESS FAMILIES INCREASED BY 9% BETWEEN 1996 AND 1999.

Number of homeless persons and homeless families in Boston, 1996–1998



Source: Department of Neighborhood Development

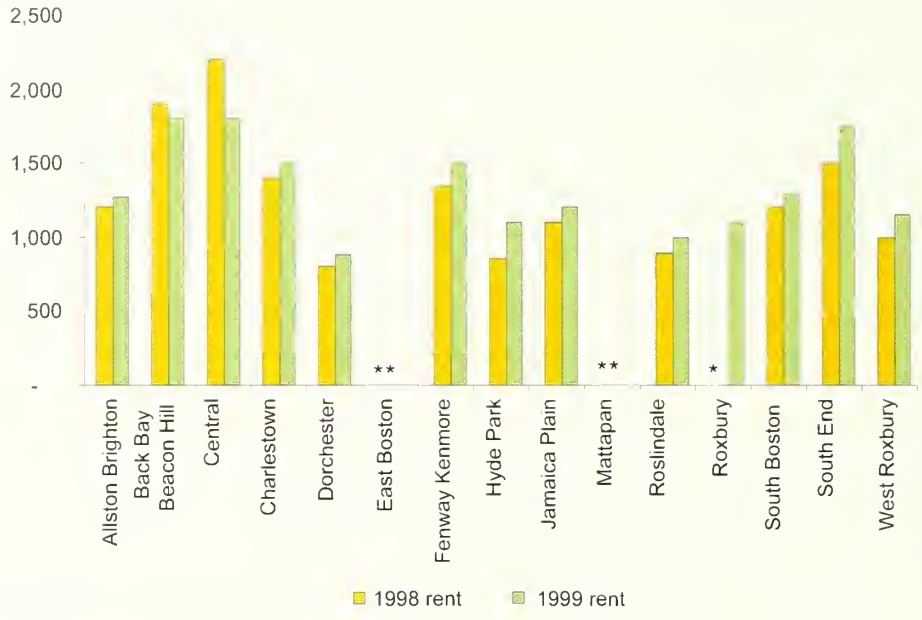
What does this mean?

A basic measure of an inadequate supply of affordable housing is an increase in the number of homeless families. While homelessness may be related to cutbacks in social services and in programs dealing with substance abuse and mental health, inadequate income to pay for rising housing costs is the major contributor. The dramatic rise in homelessness in the late 1970s and 1980s was the result of many factors — de-institutionalization, condominium conversions, dramatically escalating housing prices and the conversion of rooming houses into condominiums. In the 1990s, the lack of affordable housing is becoming the most common cause of homelessness.

Overcrowding index of neighborhoods

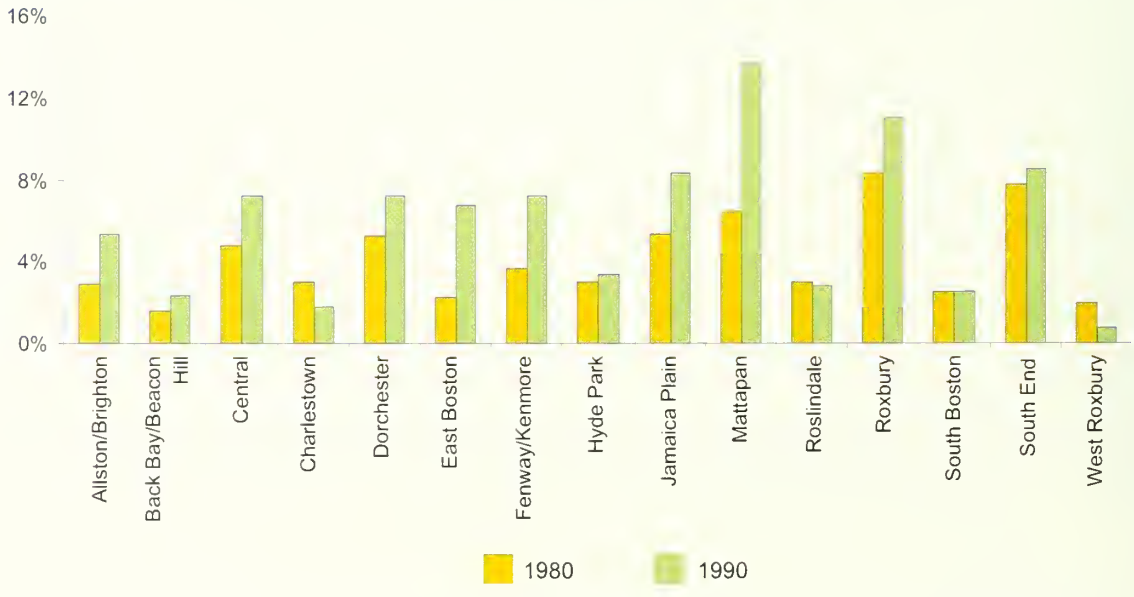
NEIGHBORHOODS WITH LARGE FAMILIES AND/OR LOWER INCOMES SHOW OVERCROWDING.

Increase in rents by neighborhood, 1998–1999



Source: Department of Neighborhood Development; Banker & Tradesman data

Housing overcrowding index by Boston neighborhoods, 1980–1990



Sources: U.S.Census, 1980 and 1990

Note. Overcrowding index is calculated by dividing number of overcrowded units (persons per room greater than 1.0) by total occupied housing units. The data include typical family housing and exclude dormitories.

What does this mean?

The U.S. Census Bureau defines overcrowding as "units with more than 1.01 persons per room." Overcrowding in units is often a function of a lack of affordability, which is directly related to the

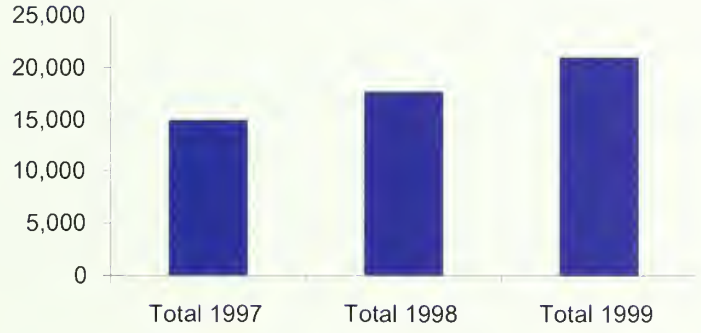
tightness of the housing market. While new Census data on overcrowding are not yet available, low vacancy rates and escalating rents (see chart showing neighborhood rent increases), indicate that overcrowding is very likely on the increase.

Census data from 1980 to 1990 show an increase in overcrowding, particularly in neighborhoods that have either a high percentage of families with children, such as Mattapan, Roxbury, East Boston and Dorchester, or in neighborhoods that have had a traditionally high percentage of student populations such as Allston/Brighton and Kenmore.

Number of families on special needs housing lists

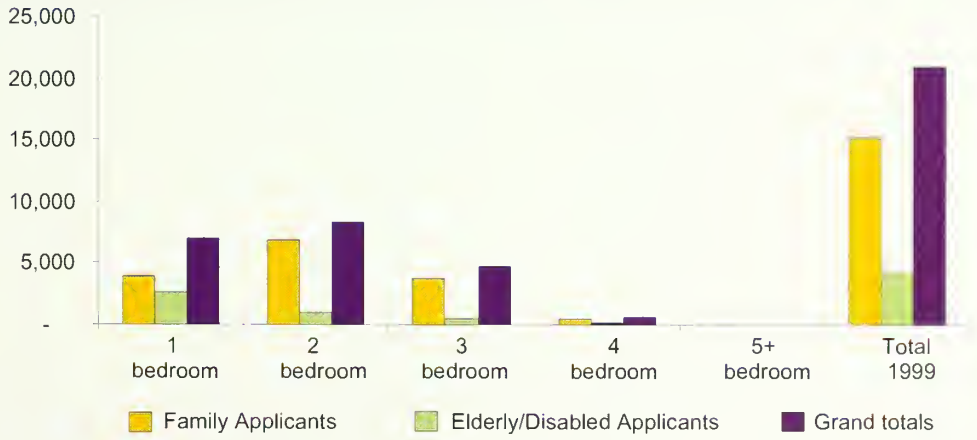
WAITING LISTS FOR PUBLIC HOUSING SHOW AN INCREASE OF OVER 40% FROM 1997 TO 1999.

Applicant pool for public housing, 1997–1999



Source: Boston Housing Authority

Number of people on Boston Housing Authority waiting list by unit size, 1999



Source: Boston Housing Authority

What does this mean?

This measure taps the largest supply of affordable rental housing in the city. Waiting lists for publicly assisted housing (including public housing and privately-owned but publicly-subsidized housing) can

give a stark picture of the level of demand for affordably priced housing versus its availability. While waiting lists do not give precise figures of the number of people who do not have affordable housing, (because the lists are not always current and households may be on more that one waiting list), they do suggest demand and trends in unmet need for affordable housing. Occupancy data from the Boston Housing Authority indicates that the number of persons currently on waiting lists exceeds the total number of available housing units.

6.2 Equitable Distribution of Affordable Housing

Well distributed, affordable, and subsidized housing in close proximity to jobs will promote balanced regional development. Particularly, as jobs are becoming more dispersed and many new entry-level and blue-collar jobs now located in the suburbs where highway access is easier. Locating affordable housing near these jobs will greatly reduce commuting burdens and promote a better quality of life. Large concentrations of subsidized housing in only a few communities, on the other hand, can reinforce class tensions, and reduce social capital as workers are shut out of the communities where their jobs are located.

Number of communities in Metro-Boston that meet the state's affordable housing goals.

ONLY EIGHT OF 101 COMMUNITIES IN METRO-BOSTON MEET THE STATE'S CHAPTER 774 GOAL OF 10% OR MORE AFFORDABLE HOUSING UNITS. BOSTON HAS THE HIGHEST PERCENTAGE ,WITH ALMOST 20%. TWO MUNICIPALITIES OFFER NO AFFORDABLE UNITS.

Top and bottom fifteen communities in Metro-Boston for the state's 10% affordable housing (40B) standard, 2000

Chapter 40B leaders		Chapter 40B Non-compliers	
Community	Percent 40B units	Community	Percent 40B units
BOSTON	19.4	HINGHAM	2.3
CHELSEA	16.6	SWAMPSCOTT	2.3
CAMBRIDGE	15.4	WESTON	2.2
LYNN	12.3	ACTON	2.1
SALEM	12.0	WALPOLE	2.0
MALDEN	10.4	LYNNFIELD	1.9
BEVERLY	10.2	WINCHESTER	1.8
LINCOLN	10.0	HOLLISTON	1.8
HOLBROOK	9.7	HULL	1.6
MILFORD	9.6	BOLTON	1.3
CANTON	9.5	CARLISLE	1.2
REVERE	9.4	NORTH READING	1.1
FRAMINGHAM	9.2	DOVER	1.0
LITTLETON	9.0	BOXBOROUGH	0.0
QUINCY	8.5	SHERBORN	0.0

Source: Metropolitan Area Planning Council

What does this mean?

The region's supply of affordable housing is not well distributed, with high percentages of affordable and subsidized housing in some communities and little to none in others. This is putting an unfair burden on the municipal budgets of communities with high concentrations of subsidized housing, by reducing tax revenues and increasing the costs of locally administered housing programs.

Chapter 774, also known as Chapter 40B, is a 30-year-old state regulation that stipulates that 10% or more of the housing units in every municipality in Massachusetts should be affordable for those earning less than the median family income for the region. Throughout the region, there are 112,924 units that qualify as affordable units, of which 48,579, or 43%, are in Boston. Although the region as a whole nearly meets the 10% goal, only eight communities, including Boston, provide sufficient affordable housing to meet the Chapter 774 qualifications. Boston has by far the highest percentage of affordable units, with almost 20%. Two communities, Boxborough and Sherborn, do not have any qualifying units.

Number of subsidized units in Boston, by neighborhood

ACCURATE DATA IS NOT AVAILABLE AT THIS TIME. PRELIMINARY DATA SUGGEST THAT SOME BOSTON NEIGHBORHOODS CONTAIN A MUCH LARGER PORTION OF HOUSING UNITS SUBSIDIZED BY FEDERAL, STATE OR LOCAL HOUSING PROGRAMS; THAN OTHER NEIGHBORHOODS.

What does this mean?

There are 45,000 subsidized housing units in Boston, 14,000 of which are Boston Housing Authority (BHA) properties. These housing units are not distributed evenly throughout the city, but are concentrated in several of Boston's neighborhoods. Preliminary data suggests that Roxbury and the South End have a large portion of neighborhood housing stock subsidized by various housing programs.

The difficulty in obtaining accurate data for this measure rests on the fact that many housing units receive subsidies from more than one source. Double-counting results as each program reports the number of units created or maintained.

6.3 Housing Affordable to All Residents

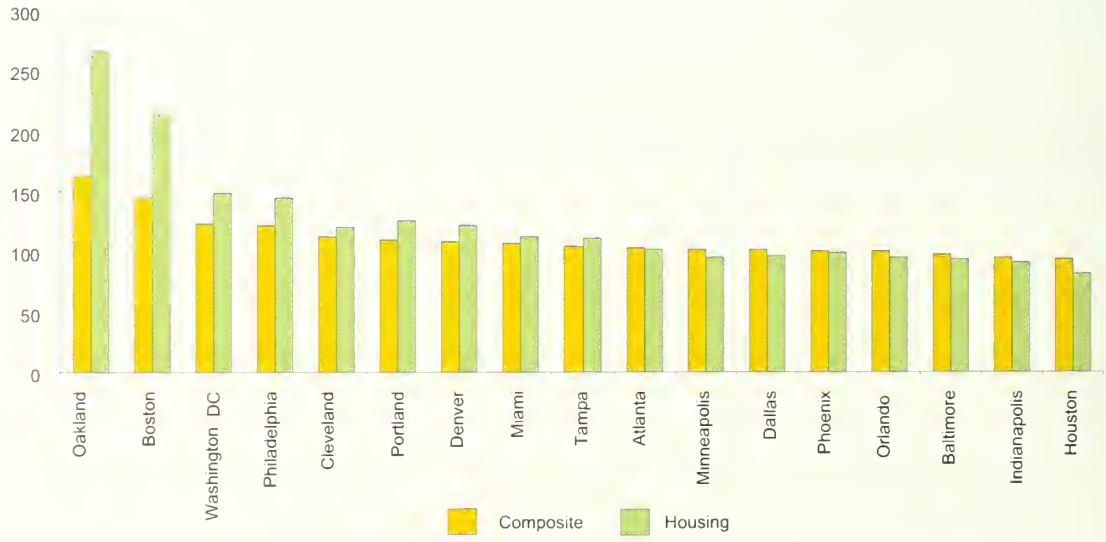
Housing affordability and supply are integrally related. Housing is the largest expense of most households. How much people have to pay for housing affects both their choice of housing type (e.g., renting versus owning and the size or quality of a home) and their disposable income for other necessities and for discretionary spending in the local economy.

Housing affordability is one of the most pressing issues in Boston and the region. A strong economy has pushed the price of housing in Boston to new highs due to rising incomes in some sectors, gains in wealth, and a sharp increase in the number of high-paying jobs located downtown. In addition, changes in household types, changing lifestyles, and a large student population are placing new demands on the housing market. The attractiveness of city living and worsening suburban traffic into Boston has also increased the demand for housing in the city. Housing that is affordable to a wide range of incomes is essential to a sustainable economy. Studies have cited the high cost of housing as a cause of the slow labor-force growth in New England

Housing costs as a percentage of the overall cost of living, Metro-Boston compared to other metropolitan areas

BOSTON'S COST OF LIVING IS SECOND HIGHEST AMONG COMPARABLE METROPOLITAN AREAS, AND IS DRIVEN LARGELY BY HOUSING COSTS.

Housing cost as a percentage of the overall cost of living Metro-Boston vs. other metropolitan areas, 1998



Source: Metropolitan Area Planning Council, ACCRA, 1998 4th Quarter

What does this mean?

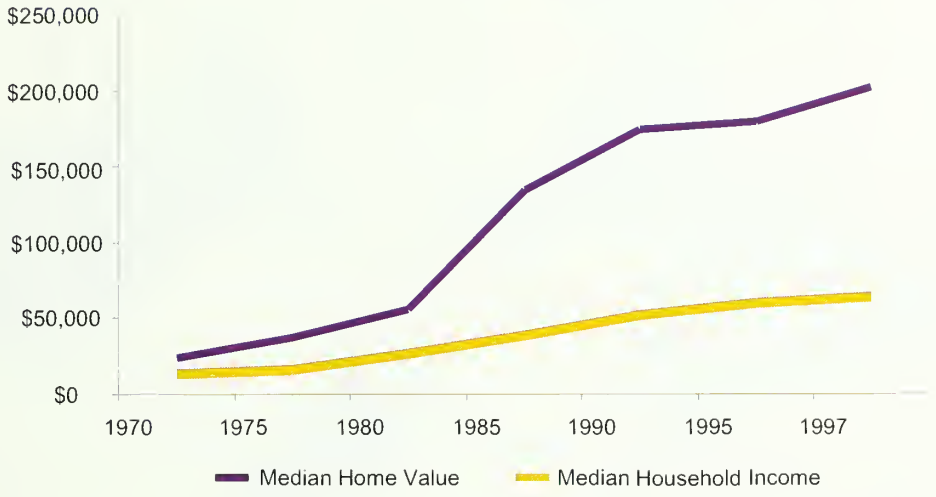
A comparative index of other metropolitan areas suggests that Boston's cost of living, which is among the highest in the nation, is driven largely by housing costs. Conventional standards of affordability use 30% of household income as the maximum amount a household can pay without compromising other needs. Lower-income families in non-subsidized housing were paying up to 50% or 60% of their income in housing costs at peak times in the Boston real estate market, leaving little available for other

necessities. In 1999, housing costs in Boston for renters and buyers continued to rise. Both home prices and rents increased by 10% from 1998 to 1999, while wages in the Northeast rose by only 3.3%.

Change in housing costs versus change in income

HOUSING COSTS IN METRO-BOSTON HAVE BEEN RISING FASTER THAN INCOME OVER THE PAST THREE DECADES.

Housing costs vs. income, Metro-Boston, 1970–1997



Source: Boston Redevelopment Authority

What does this mean?

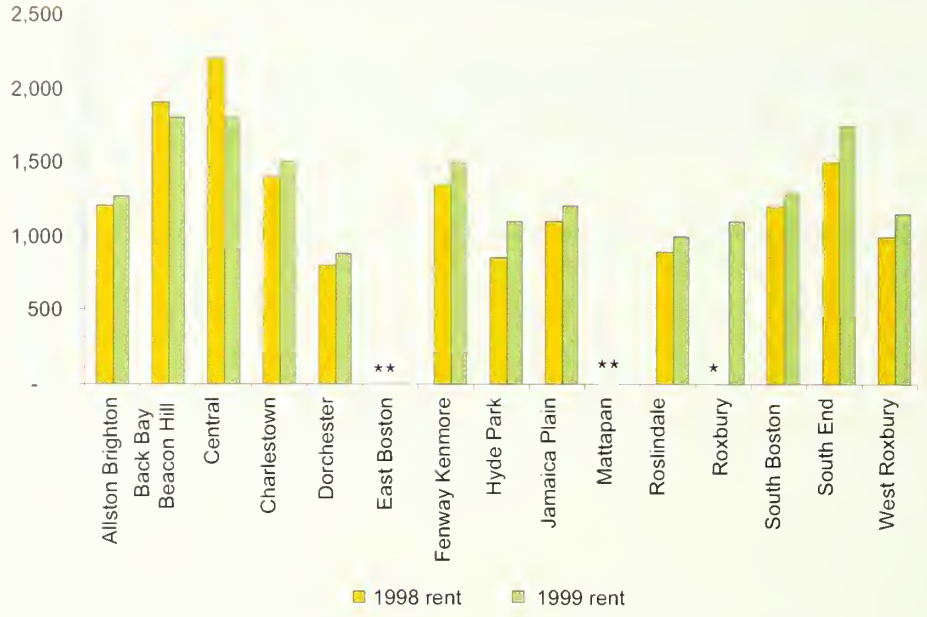
Residents of the region on fixed incomes and those with low-wage jobs are at an increasing disadvantage in the housing market. For the past three decades, wages for the vast majority of workers have stagnated, rising only towards the end of the current economic expansion.

In 1970 the median housing cost was slightly more than the median household income; by 1997, housing prices had grown to be nearly four times the median household income. There are many possible explanations for this, including a tight housing market, an increase in disposable income among high-paid workers and investors, a rise in the number of two-earner households, changes in federal and state tax laws, and changes in consumer lifestyles, including a preference for larger and more elaborate homes. Whatever the reason, it is clear that many people are either choosing or being forced to spend a larger portion of their income on housing.

Housing affordability by neighborhood

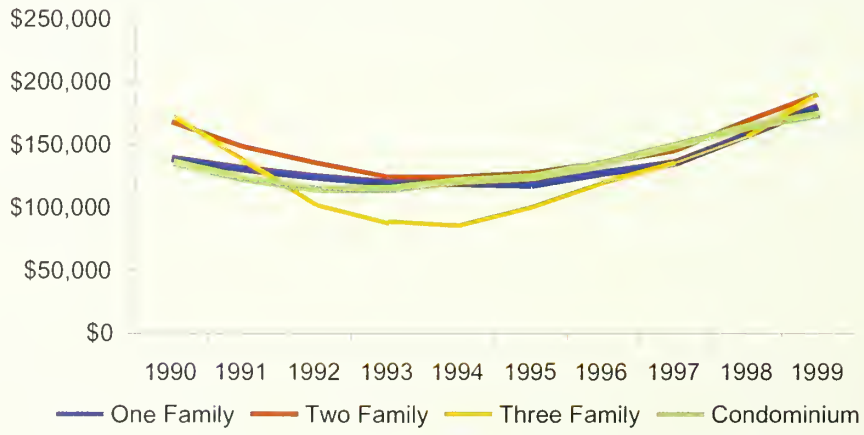
FROM 1998 TO 1999, CITYWIDE RENTS FOR TWO- AND THREE-BEDROOM APARTMENTS INCREASED BY 9% AND MEDIAN SALES PRICES INCREASED BY 12%. ALREADY BY 1998, 64% OF BOSTON HOUSEHOLDS COULD NOT AFFORD TO BUY A MEDIAN-PRICED HOME IN THE CITY

Change in home rents by neighborhood, 1998–1999



Source: Department of Neighborhood Development; Banker & Tradesman data

Change in home values, 1998–1999



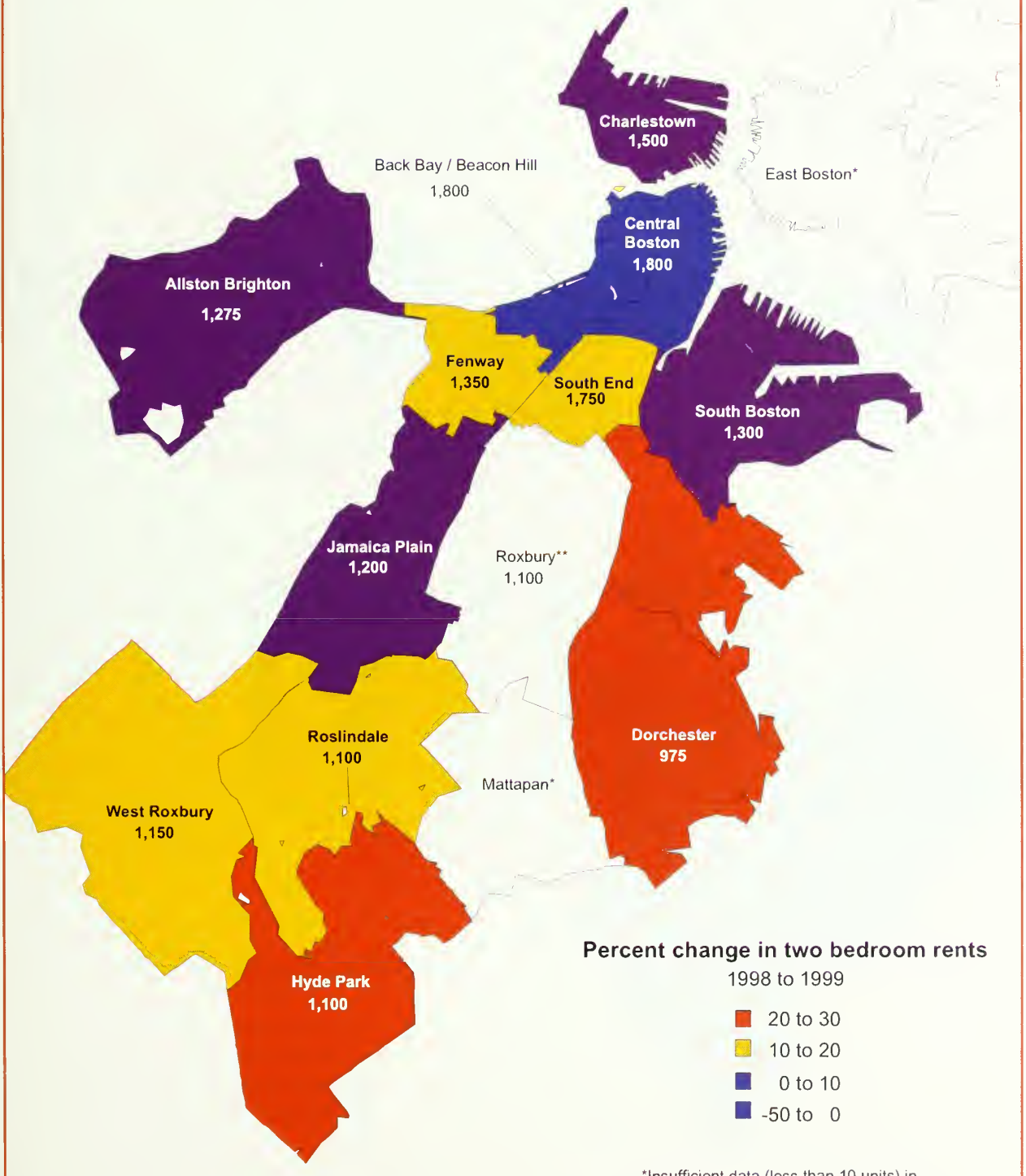
Source: Department of Neighborhood Development; Banker & Tradesman data

What does this mean?

In today's tough housing climate, existing homeowners have fared well. They have taken advantage of lower mortgage rates to lower their housing costs, making their housing more affordable. Housing affordability for new buyers and renters, on the other hand, is a critical concern that is having an impact on both the economy, discouraging young workers, and on the quality of life of many Boston residents.

Boston's advertised asking rents continue to increase. Between 1998 and 1999, citywide two-bedroom and three-bedroom rents increased by 9% and rents for one-bedroom apartments increased by 3%. The volume of apartments advertised for all unit types decreased by 30%. In 1999, median home sales prices also continued to rise, going from $162,500 in 1998 to $ 182,000 in 1999—a 12% increase. Median sales prices increased the most in the South End and East Boston, by 23% and 21% respectively. The volume of total home sales between 1998 and 1999 increased by 16%.

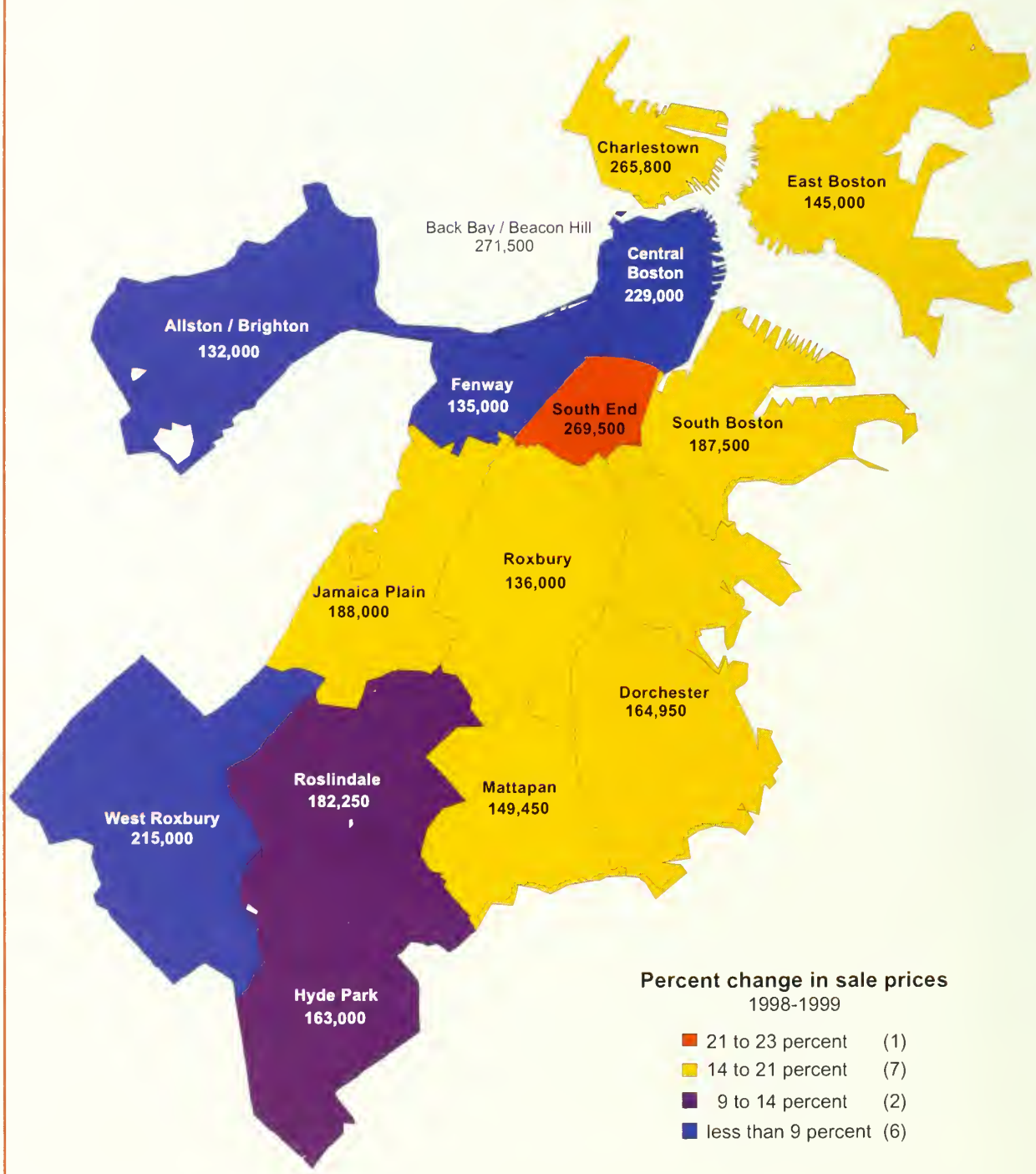
Boston neighborhood median rents for a 2-bedroom apartment



Source: Department of Neighborhood Development
Map prepared by Geoff Lewis, Boston Redevelopment Authority

*Insufficient data (less than 10 units) in 1998 and 1999
**Insufficient data (less than 10 units) in 1998, unable to compute percent change.

Boston neighborhood median housing sales price



Source: Department of Neighborhood Development
Map prepared by Geoff Lewis, Boston Redevelopment Authority

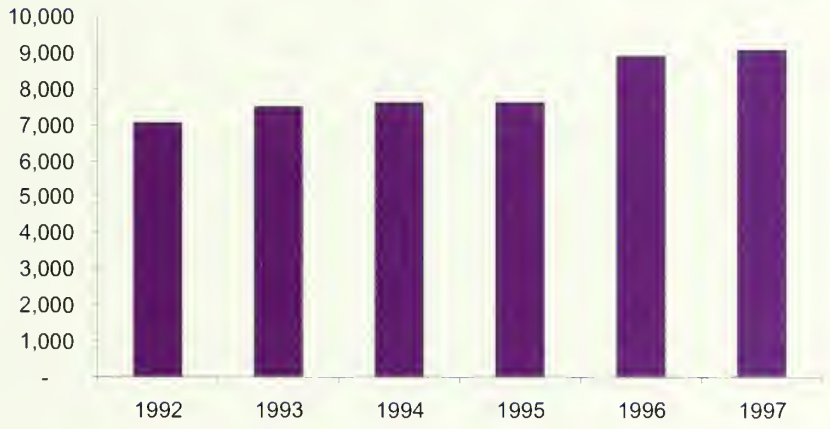
6.4 Safe and High Quality Homes

Boston has an older housing stock. Though charming, homes with beautiful detail and craftsmanship require extra maintenance and, unless kept up, pose a number of problems that can affect both the state of the housing and the health of its occupants. Most houses built before 1970, when new laws went into effect prohibiting the use of lead in paint, for instance, are likely to contain lead paint. Other potential health hazards in older housing stock include environmentally unsafe materials such as asbestos, and (in poorly constructed or maintained stock), moist, leaky conditions which encourage the growth of mold and other biological organisms that can aggravate asthma and other health conditions, particularly in children. Boston has a number of programs to encourage both historic preservation and environmental safety.

Number of permits for rehabilitation and new construction

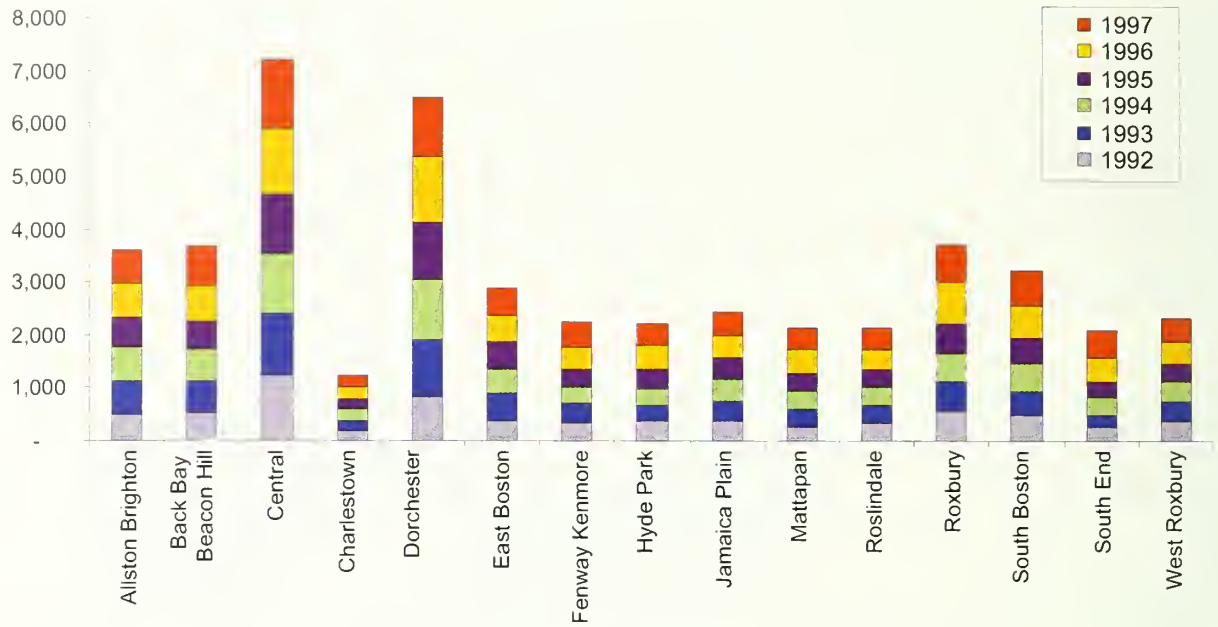
BOSTON HOMEOWNERS CONTINUE TO INVEST IN THEIR HOMES. SINCE 1992, ABOUT 20% OF BOSTON'S HOUSING HAS BEEN REHABILITATED OR BUILT NEW.

Number of permits for rehabilitation and new construction, 1992–1997



Source: Department of Neighborhood Development

Construction activity by neighborhood, 1992–1997

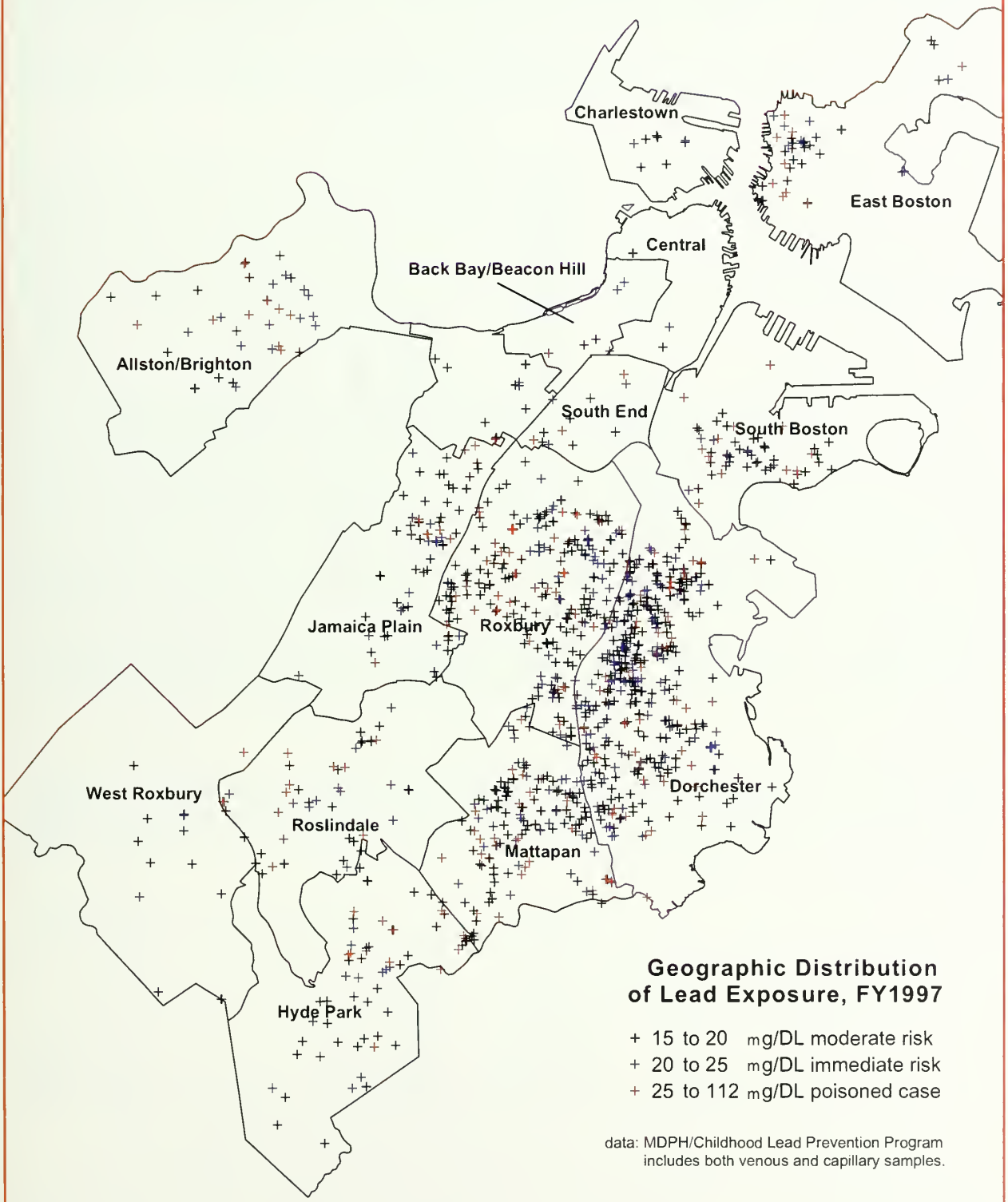


Source: Department of Neighborhood Development

What does this mean?

A good indicator of improvement in the condition of housing stock and of the housing supply is the increase in the number of housing rehabilitation and new construction permits and the decrease over time in demolition and board-ups of existing and dilapidated stock. Demolitions and board-ups typically happen when conditions have deteriorated significantly and when the housing market is not strong enough or incomes high enough to support the cost of rehabilitation. Boston, being an old and densely built city, has fewer opportunities for new construction than many other municipalities in Metro-Boston. Large tracts of new housing were constructed during three distinct periods. Large public housing developments were constructed after World War II; in the 1960s and 1970s, new housing was built as a result of urban renewal efforts; and in the 1980s, apartment housing was developed with the revival of downtown Boston. Scattered new construction has also occurred over the past two decades to replace severely dilapidated, abandoned, and burned down stock. Given the city's older housing supply and the still-significant inventory of vacant land, levels of rehabilitation and new construction can be used to measure housing and neighborhood investment and improved housing quality. From 1992 to 1997, almost one-fifth of Boston's housing stock of about 250,000 units was rehabilitated or built new.

Lead poisoning cases in Boston



Geographic Distribution of Lead Exposure, FY1997

+ 15 to 20 mg/DL moderate risk
+ 20 to 25 mg/DL immediate risk
+ 25 to 112 mg/DL poisoned case

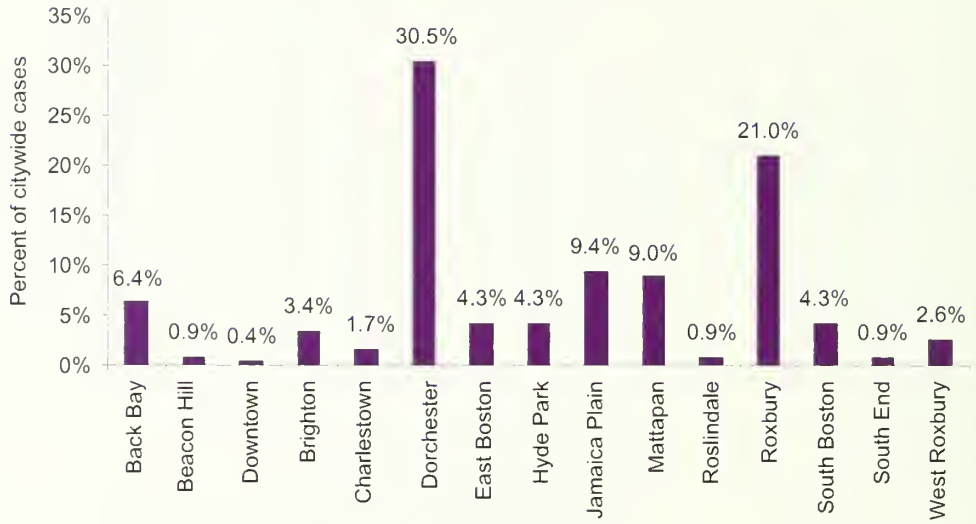
data: MDPH/Childhood Lead Prevention Program
includes both venous and capillary samples.

Research and Development Unit
Department of Neighborhood Development
Charlotte Golar Richie Chief and Director

Number of reported cases of lead poisoning and asthma hospitalizations

THE NUMBER OF CASES OF BOTH LEAD POISONING AND ASTHMA VARY AMONG NEIGHBORHOODS AND ARE HIGHER IN BOSTON'S LOWER-INCOME AND MINORITY NEIGHBORHOODS, REFLECTING POORER HOUSING CONDITIONS.

Number of asthma incidents requiring treatment by Emergency Medical Services, by Boston neighborhood, 1997



Source: Boston Public Health Commission

See map on facing page for lead poisoning among children in Boston

What does this mean?

Lead poisoning and asthma are perhaps the most serious and prevalent child health problems. They can result from both housing and environmental conditions. Old lead paint, lead water pipes, and lead contamination in soil can lead to lead poisoning; poor housing conditions such as leaky roofs, rodents, mold, and dust mites can aggravate asthma.

Peeling lead paint in housing accounts for a large percentage of lead poisoning cases and has, therefore, been closely monitored and regulated. Poor housing conditions compound the problem. However, the elevated levels of lead in the blood of children tested over the summer months suggest a need for increased focus on airborne lead and lead in soil in residential areas. In Boston, lead poisoning cases were the highest in the neighborhoods of Dorchester and Roxbury, which are also neighborhoods with the most children. Asthma hospitalizations rates are the highest among children under five, followed by children ages 5–14 years of age. The highest incidents for the administration of Albuterol — a drug administered by Emergency Medical Services personnel for the treatment of asthma was reported in the neighborhoods of Dorchester (30.5%) and Roxbury (21%). While increased public awareness, public health reporting, legal requirements for property owners, and funding for lead paint removal programs have helped put the focus on deleading in housing units, the link between poor housing conditions and high rates of asthma is only now becoming understood.

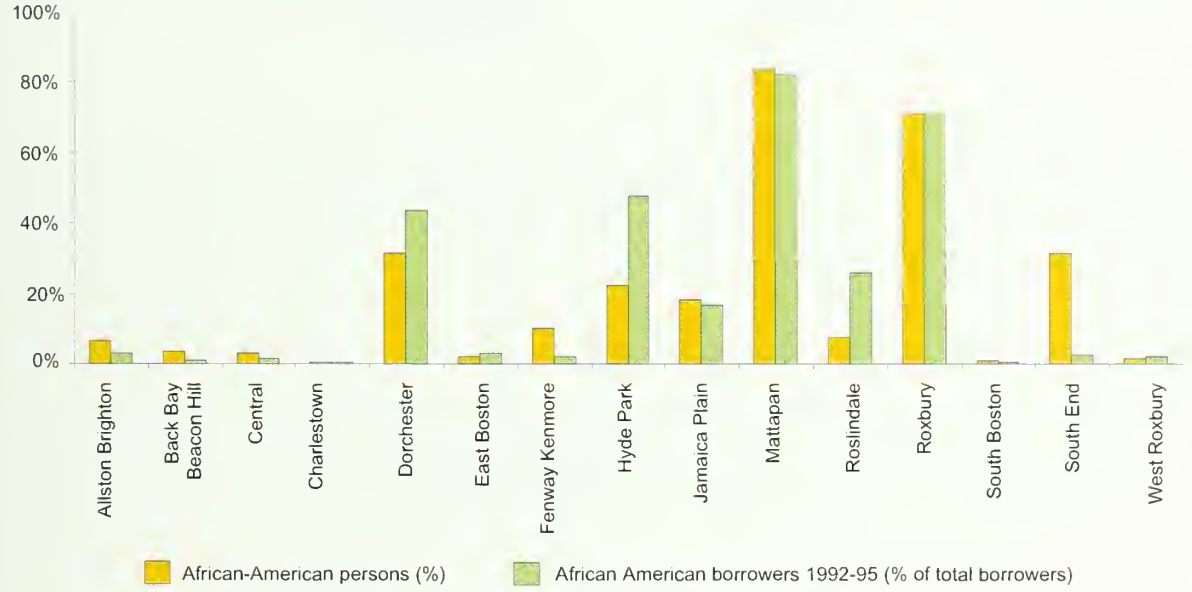
6.5 Fair Housing

Lending inequalities have long been a concern. In the 1970s, studies commissioned by the Massachusetts Banking Commission established that residents of low-income neighborhoods and minorities received a disproportionately low number of loans as compared to whites. The problem has persisted into the 1980s and 1990s. Though there has been some improvement, recent studies indicate a lending bias.

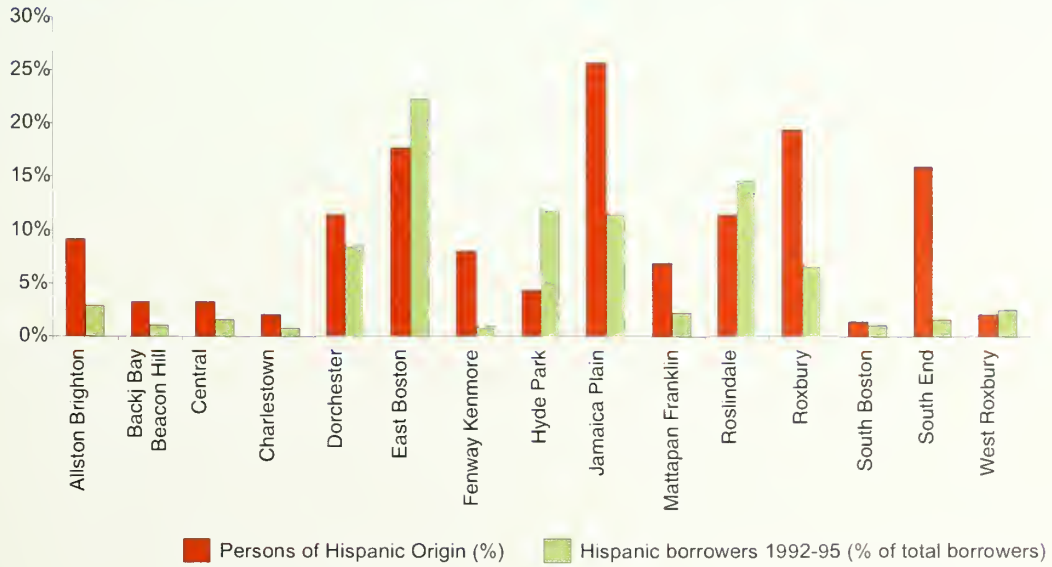
Access to mortgages by race and by neighborhood

DISPARITY IN ACCESS TO HOME MORTGAGES FOR BLACK AND HISPANIC APPLICANTS HAS BEEN GREATLY REDUCED, YET CONCERNS LINGER.

Percent of home purchase loans to blacks by neighborhood, 1992–1995



Percent of home purchase loans to Latinos by neighborhood, 1992–1995



Source: Prof. Jim Campen, University of Massachusetts, Boston

What does this mean?

As with home improvement loans, access to mortgage money directly affects a family's ability to purchase their own home and make a financial and personal investment in their neighborhood. The number and amount of loans made to different neighborhoods reflect residents' opportunities to purchase, the equity of bank lending practices, and the extent of neighborhood investment by lending institutions. In addition to inequitable lending practices, a detailed study commissioned by the Federal Reserve Bank of Boston shows that though there were legitimate factors (lower incomes, poorer credit histories, and requests for loans larger than could be supported by incomes), the denial rates for low-income neighborhoods and black and Latino applicants were higher than for those of their white counterparts. Particular areas of concern, as illustrated in a 1998 study by University of Massachusetts Professor Jim Campen, include disparity in the rate of denials for Latinos and blacks, a low level of applications, and the lack of effort on the part of most lenders to encourage minorities to pursue loan applications. These trends have been changing, with new programs by lending institutions leading to a higher percentage of home purchases by people of color. More recent neighborhood data should reflect this shift.

6.6 Stability of Neighborhoods

Length of tenure and the condition of properties contribute greatly to the quality of life and the stability of neighborhoods. This indicator is particularly important to watch in times of economic change. Rapid turnover, for instance, can indicate gentrification during periods of economic boom or abandonment during economic downturns.

Number of in-movers and out-movers by neighborhood

DATA NOT AVAILABLE AT THIS TIME.

FOR DATA ON LENGTH OF TENURE, SEE CIVIC HEALTH SECTION.

What does this mean?

Rapid movement in and out of a neighborhood affects the ability of people to get to know and trust their neighbors and build a sense of community. People who live at the same address for three to five years are more likely than those in transition to invest in their community as well as in their homes and yards. These investments contribute to the quality and stability of a neighborhood. The City of Boston is beginning a regular study of the number of in-movers and out-movers by neighborhood. Clear trends in any direction can reflect important social and economic dynamics of a neighborhood. This measure speaks to the stability or disinvestment of a neighborhood over a period of time.

Number of abandoned properties in Boston

THE NUMBER OF ABANDONED PROPERTIES IN BOSTON DECREASED 40% FROM 1997 TO 1998.

Abandoned properties in Boston, 1997–1998

Source: Department of Neighborhood Development

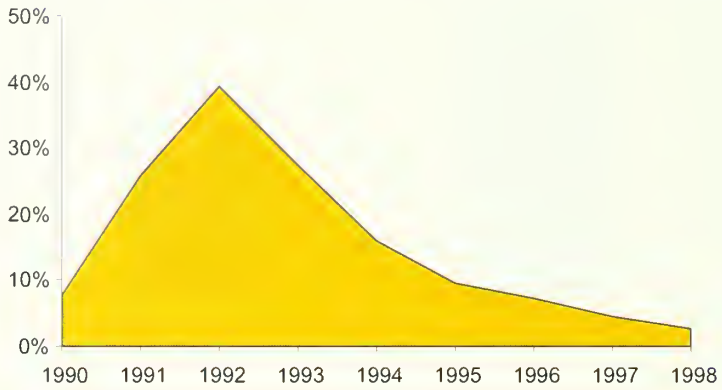
What does this mean?

Property abandonment signifies multiple problems: unsafe and unhealthy housing conditions; neighborhood blight; potential for illegal activity and potential for fire damage; as well as lower property values. The problem of abandonment correlates with the age and condition of housing and fluctuates with the strength of the real estate market, available financing for home improvements and rehabilitation, and the general economy. In strong economic times and in neighborhoods with rising property values, abandonment decreases, with increased investment in distressed properties. Abandonment rates vary over time in the same neighborhood depending upon housing values and market strength. Changes in the level of abandonment can say a lot about changes in neighborhood conditions and the quality of life. The City of Boston recently completed a citywide survey, which will be updated on an annual basis, providing comprehensive data on housing abandonment. The decline in abandonment in recent years signals a tight housing market, increasing property values, and improved neighborhood conditions.

Mortgage foreclosures in Boston neighborhoods

1999 FORECLOSURE RESALES ACCOUNTED FOR ONLY 2% OF ALL SALES, DOWN FROM 40% IN 1992. HOWEVER, 14% OF ALL SALES IN MATTAPAN AND 10% IN ROXBURY WERE FORECLOSURE SALES.

Mortgage foreclosures in Boston 1990–1999



Source: Department of Neighborhood Development, Banker & Tradesman data

What does this mean?

Mortgage foreclosure rates are telling indicators of the stability of families and properties in a neighborhood and can signal major changes. At the peak of mortgage foreclosures in the early 1990s, large inventories of foreclosed properties created a greater number of vacant properties, which posed maintenance and security problems, contributing to an increase in crime rates. The glut of properties on the market caused a further decline in property values. Multiple foreclosures in a neighborhood often occur in times of economic recession or sharply rising costs of living when people are unable to keep up with their loan payments. The same problems that force properties into foreclosure can slow housing sales, leaving many properties vacant, which leads to economic disinvestment, physical deterioration and neighborhood instability. Data indicate that resales of bank foreclosed property in 1999 dropped to 2% of all home sales — which signifies better economic health in Boston. Overall foreclosure sales decreased from 1998 to 1999. In Mattapan and Roxbury, however, foreclosures accounted for over 10% of home sales, with 4% in Dorchester. All other neighborhoods were well below 5%.

SECTION SEVEN

Public Health

Vision

A community that supports and enhances the well-being of its residents of all ages by promoting healthy behaviors and choices and ensuring that there are no pockets of unmet need.

Indicators of a Healthy Community	Measures	How Is Boston Doing?
7.1 Universal Access to Health Care	■ Percentage of Boston residents without health insurance	■ From 1994–1997, 15% of Boston residents reported that they were without health insurance
	■ Percent of Boston's public school students with English as a non-primary language	■ 37% of Boston's public school students speak a primary language other than English, indicating potential linguistic barriers to accessing health care
7.2 Investment in Healthy Children	■ Percentage of women receiving adequate prenatal care by race	■ Boston shows a steady rise in the percentage of women receiving prenatal care in the first trimester
	■ Immunization rates by race and by neighborhood	■ Boston and Massachusetts lead the nation in the percent of children vaccinated
7.3 Commitment to Preventive Health Strategies	■ Rate of preventable hospitalizations by age	■ Rate of preventable hospitalizations in Boston was highest for residents ages 0–9 and ages 45 and over
7.4 Healthy Behaviors	■ Percentage of Boston residents who participate in risky behaviors (smoking, drinking, or drug use)	■ Smoking is on the decline; alcohol and drug abuse are the 8th and 10th leading causes of death in Boston
	■ Percentage of Boston residents who participate in healthy behaviors	■ Boston students report declines in sexual activity and increases in condom use
7.5 Low Death Rates	■ Leading causes of death	■ Cancer and heart disease remain the leading causes of death in the city, state, and nation
	■ Infant mortality rates by race	■ From 1997 to 1998, infant mortality declined in Boston. Racial disparities are a continuing concern
7.6 Low Rates of Disease	■ Leading causes of hospitalization by gender and by age	■ Pregnancy, births, psychoses, and substance abuse are the leading causes of hospitalization in the city
7.7 Low Rates of Environmental Hazards	■ Asthma rates by gender, age and by neighborhood	■ Rates of asthma are increasing in Boston, especially among children. Neighborhood rates vary considerably, with Roxbury and Dorchester together accounting for 50% of cases
	■ Percentage of children with lead poisoning by neighborhood	■ Despite declines in blood lead levels among Boston children, neighborhood disparities are a cause of concern

Public Health

Historical context

Boston is a pioneer in the history of medicine and public health in the United States. Bostonians established the first local board of public health in 1799, with Paul Revere as one of its first twelve members. One of the first reports to link environmental and social factors to health was Lemuel Shattuck's "Report of the Sanitary Commission of Massachusetts", presented to the state legislature in 1850. In 1859, the Massachusetts Department of Public Health was established, the first in the nation.

In the 1900s, public health concerns began to revolve less around sanitation systems to prevent the spread of infectious disease, and to center more on reforming the health care system so that the uninsured could get care, costs could be brought under control, and health disparities could be addressed. In the 1960s and 1970s, Boston was at the forefront of the movement to create neighborhood-based health centers governed by residents in partnership with health care professionals. In the 1980s, Boston was again at the forefront of the national public health debate, extending the traditional definition of "health" to public safety concerns such as youth and domestic violence. In the late 1980s, Boston's Department of Health and Hospitals also began to emphasize the impact of strong, resilient communities and family networks on health outcomes.

Regional context

In Massachusetts in 2000, 346,000 people — about 5.9% of the state's population — lack health insurance. This is a great improvement over 1998, when almost 500,000 people, or 8% of the state's population, lacked health insurance. A recent University of Massachusetts study showed that statewide, 24.5% of Latinos, 17.3% of blacks, 17% of Asians and 8.8% of whites lacked health insurance.

Thanks to sustained and broad-based advocacy led by Health Care for All, the United Way of Massachusetts Bay's Success by Six Initiative, business leaders and others, Massachusetts now offers expanded health care coverage for children. In 1993, passage of the Children's Medical Security Plan guaranteed health care coverage for low-income children under the age of 12. Twice expanded to offer more benefits and to cover more children, the act now covers all children in Massachusetts under the age of 18 whose family income is less than twice the poverty rate.

However, managed care and capitated rates of reimbursement and reductions in federal funding for hospitals are creating a complex and volatile health care system. With acquisitions, mergers and other abrupt shifts in the health care system affecting all providers, from community-based health centers to the largest medical care organizations in the state, it is not clear what the future will hold.

The Massachusetts Department of Public Health (MDPH) has modeled the use of partnerships and community empowerment to address smoking, AIDS and HIV, youth violence, nutrition and other concerns. However, Massachusetts is nevertheless experiencing rising rates of childhood hunger, child abuse and neglect, and teenage drug use. An August 2000 survey by the U.S.Department of Health and Human Services ranked Massachusetts highest in the nation in alcohol and drug addiction among 12–17 year olds, despite a general decline in drug use nationally.

To monitor conditions, the MDPH and the Boston Public Health Commission are working in collaboration to develop new information systems designed to improve the quality of health data and the tracking of key indicators. MDPH efforts include electronic birth certificates, an immunization tracking system to easily access a patient's immunization history and First Link, a high-risk-infant identification system that connects newborns considered to be at high risk and their families with services offered by community service providers. Residents of Boston can access the state's health data at MassCHIP, an online database service at www.state.ma.us/dph.ose/mchphome.html.

In addition to conventional health risks, issues such as poverty and hunger continue to plague many families in the region. According to a 1998 Project Bread-Tufts University study, 63% of Massachusetts emergency food programs experienced an increase in demand for food aid in 1997; 49% of the emergency food programs in the state saw an increase in the number of families with children requiring food aid. Approximately 35% of clients served by emergency food assistance were children, and 27% of the adults requesting emergency food assistance were employed.

The Massachusetts Public Health Association has initiated an advocacy program to address a number of issues of concern to low-income communities.

Citywide context

Boston possesses an extensive network of organizations and individuals working collaboratively to address public health issues such as access to quality care, disease prevention, health education and health promotion for all residents — regardless of their ability to pay. This network includes: nearly 30 Boston neighborhood health centers providing a primary-care network throughout the city; traditional fee-for-service and managed-care direct-service providers; 16 hospitals; three schools of medicine; three schools of public health; and scores of community-based groups and social service agencies. Most are now linked through contractual and partnership agreements to health management organizations and systems, as well as, through the monitoring of the Boston Public Health Commission. All contribute to the overall health status of Boston residents.

In Boston, as in all of Massachusetts, hospitals are required under statute to contribute to a statewide free care pool that covers the cost of uncompensated care provided by hospitals. The pool is intended to remove incentives to deny care to the uninsured. In 1998, the 13 teaching hospitals in Boston provided approximately $250 million in uncompensated care to people with incomes below 400% of the federal poverty level (although not all patients came from Boston). The former Boston City Hospital (now part of Boston Medical Center) provided almost half of this total care.

Under voluntary guidelines promulgated by the state's Attorney General, non-profit acute care hospitals are urged to work closely with communities and to provide financial support for "community benefits" programs addressing the unmet health care service and public health needs of vulnerable populations. At the time the guidelines were issued in 1994, Boston's non-profit teaching hospitals had substantial cash reserves, while Boston's low-income communities faced numerous health crises such as high infant mortality rates. The community benefits programs implemented over the last several years by Boston's hospitals have helped to focus resources and to involve community-based leaders and health professionals in formulating solutions to these challenges.

In response to the fact that an estimated 5-10% of Boston's youth lack health insurance, Mayor Thomas Menino has launched "Insuring the Future" in partnership with Boston 2000 and the Boston Public Health Commission (BPHC). The mission of the project is to enroll every Boston child under the age of 19 in a health insurance program.

Citywide efforts to invest in healthy children have produced an increase in the number of women receiving prenatal care in their first trimester (76% in 1996), impressive childhood immunization rates (at 88% in 1996, according to the Centers for Disease Control, the highest of any city in the nation), as well as reductions in the percentage of children screened who show evidence of lead poisoning. BPHC seeks to protect children from environmental hazards by monitoring asthma incidence and blood lead levels. Boston has also enacted a ban on smoking in restaurants and now has lower smoking rates than the state overall.

Boston continues to innovate in the field of community health. The city was one of the first to focus on the problem of rising youth violence as a public health issue. A collaborative effort to reduce violence-related injuries coincided with

four consecutive years of significant reductions in firearm and sharp instrument injuries, as well as in homicides among adolescents and young adults. However, youth violence is once again in the headlines in Boston, reflecting an increase in young adolescents.

Boston's active HIV/AIDS service community has provided years of quality comprehensive care to those living with the disease. The City's Homeless Census assists planners in providing shelter, food, employment training and other services to Boston residents in need.

Most recently, the City has initiated the Crusade Against Cancer. Through the Crusade, Boston's goal is to become the cancer prevention capital of the world. Partners from across the city and from every sector have stepped forward to join the city in this Crusade, which is organized not as a campaign but as a long-term strategy for decreasing Boston's number one cause of death.

The City of Boston, through the BPHC, conducts annual meetings in Boston's neighborhoods where residents are able to offer input on the City's public health policy agenda and to define their own health priorities. Meetings held in the spring of 1998 revealed that residents value access to information about health indicators in the city and in their own neighborhoods. As a result, BPHC is releasing neighborhood-level health status reports with state and national comparisons.

The BPHC is now expanding programs that address these concerns and creating new initiatives where necessary. By continuing to track increasingly sophisticated health indicators and working collaboratively with its community health partners, Boston seeks to build on its successes in immunization rates, prenatal care and risky behavior reductions.

Neighborhood context

Boston's many community-based institutions, neighborhood health centers and grassroots organizations offer a range of quality services and focused strategies to meet the health care needs of residents. For example, Soldiers for Health, a grassroots organization in Egleston Square, has partnered with Brigham and Women's Hospital and the Boston Police Department to build a network of resident health workers. Boston's nearly 30 community health centers offer culturally and linguistically appropriate services, provide good local employment and serve as anchors for health outreach, advocacy and many other community-building activities. For example, the South Boston Health Center's Language and Culture Access Project is offering culturally and linguistically appropriate services to the recent Latino, Asian and European immigrants who have changed the neighborhood's demographics. The Fenway Community Health Center offers high quality health care to Boston's gay, lesbian, bisexual and transgender community and is a nationally recognized leader in HIV/AIDS care and research. The Dimock Community Health Center in Roxbury provides state-of-the art job training in a variety of health fields. The Codman Square Health Center in Dorchester has established the Civic Health Institute to link community concerns and aspirations with public policy initiatives.

Statistics show, however, that despite these and other sustained efforts, Boston neighborhoods with high rates of socio-economic distress continue to suffer disproportionately high rates of health concerns. From 1990 to 1996, the lowest percentage of women receiving prenatal care in the first trimester lived in Mattapan, Dorchester, Roxbury and East Boston. Elevated blood lead levels among children were found predominantly in Dorchester, Mattapan, Roxbury and Jamaica Plain. Although some severe cases of childhood lead poisoning appear in every part of the city, a higher percentage of the more severe cases were found in Dorchester, Mattapan, Jamaica Plain and Roslindale. According to the 1998 Health Status Report, Roxbury's asthma rates among children under five during the period 1994–1996 was 19 per 100,000 population, almost twice the citywide rate of 11.1 and nearly five times as high as the statewide rate of 4.0 per 100,000.

In an article on a study by the BPHC, the Boston Globe reported that Mattapan had the highest overall annual death rate for men ages 15-24 between 1990 and 1996, more than twice the city

rate overall. South Boston had the highest rate of death from substance abuse for men ages 25-35, more than twice the city rate. South Boston has also been hit hard by a number of youth suicides. These disparities, if validated and still in effect today, suggest the need for more targeted strategies and resources. Awareness of the variations in health status among Boston's neighborhoods and racial/ethnic groups based on data collected and monitored by BPHC can lead to new partnerships and collaborations, focused public education, and the targeted use of scarce resources.

Remaining challenges

- **Access to health care remains a top priority; in particular, language, transportation and other cultural and non-cultural barriers need to be addressed.** The BPHC has recently begun to strategize and formulate plans for addressing specific access issues affecting young men, the elderly, immigrants and the gay, lesbian, bisexual, and transgender community. All residents need to be able to easily access primary and preventive care services in order to lead healthier lives.

- **Racial disparities in cancer screening rates and cancer deaths indicate the need to target awareness and screening programs for cancer — the leading cause of death in the city.** Age, gender, and educational and cultural barriers to screening require that more be done to increase mammography and cervical cancer screening in all women, as well as prostate and colo-rectal screening in men.

- **Efforts to reduce low-birth-weight babies must continue, especially among those racial groups disproportionately affected.** Low birth weight has long been identified as one of the major predictors of increased risk for infant death and is also an important indicator of later health problems. Low birth weight has been linked to maternal health, as well as to increased multiple births, and may be best reduced by providing at-risk women of child bearing age with access to multi-disciplinary care, including both primary care and other health-related services such as addiction treatment and domestic violence services.

- **The financial stability of our community health centers continues to be threatened by changes in health care, including managed care, capitation, and cutbacks in public funding for direct and preventative care.** According to a study released by the Massachusetts League of Community Health Centers, more than half of the state's 46 community health centers lost money on an operating basis over the last four years. More than 40% of the health centers lost money even with the infusion of federal and state grants and other revenues. Unlike hospitals, the community health centers, which had more than 2.9 million patient visits last year, have no cash reserves or investments to cushion them. The state distributed $5 million in "hardship relief" grants to 11 centers in February, but a long-term solution will require that the reimbursement rates be increased for the Medicare, Medicaid and uninsured patients that the centers treat.

- **An increasing number of low-wage working families cannot afford food because of underemployment, high housing costs, and lack of affordable child care.** With the rising costs of living, some families are being forced to choose between paying for rent and heat, and buying food. If the state's children are to be protected from hunger and the impact it has on their health and school success, child nutrition programs must be expanded, and families with children must receive the support they need to juggle the competing demands for their income.

- **Despite extensive City efforts and a booming economy, homelessness in Boston is on the rise.** According to the Emergency Shelter Commission, there were 5,272 homeless individuals in Boston in 1998. The percentage of children in Boston's homeless population increased from 18% in 1997 to 19% in 1998. Homeless individuals, especially children, are at an increased risk for significant health problems.

- **More working people are in jobs that either do not provide health insurance coverage or require significant premium cost sharing.** This places health coverage out of their

reach, especially in the wake of welfare reform. Public officials, working in partnership with consumers, community organizations, and the private sector, need to devise strategies to extend health coverage to the working uninsured.

- **Massachusetts has become the 31st state to mandate full insurance coverage for people suffering from mental illness. Given the importance of this change, employers and insurers should make an effort to start the coverage as quickly as possible.** The Massachusetts Department of Mental Health estimates that 8,565 children and adolescents in Boston need public mental health services. A shortage of appropriate care has led to an influx of young people with acute psychiatric crises into general hospitals ill-equipped to deal with them. Consistent and continuous mental health care for those who need it should include community- and school-based care and early identification of at-risk youth.

- **Lack of dental care is fast reaching crisis proportions in Massachusetts.** According to Health Care for All, only about 700 of the state's practicing dentists accept MassHealth (Medicaid) and only 34% of the children on MassHealth in the state actually receive dental care. Many who don't qualify for Medicaid can't afford dental care or have health insurance that doesn't cover dental care. A special commission which includes legislators, dentists, state government officials and activists is working to better understand and publicize the dental access crisis. Challenges include a scarcity of dentists in some parts of the state, inadequate reimbursement rates, rigid benefit packages, language and transportation barriers and a lack of education about the value of preventive dental care.

Boston Residents' Public Health Priorities

The Boston Public Health Commission's neighborhood meetings revealed the following priorities of residents:

- increased availability of health information through outreach and community education;
- decreased environmental hazards (asthma and lead poisoning, in particular);
- increased access to health care;
- increased focus on adolescent and youth health;
- increased prevention and early detection of breast and other cancers;
- increased general neighborhood sanitation and safety;
- increased HIV/AIDS prevention and services;
- increased substance abuse treatment, tobacco control; and
- increased domestic and other violence prevention, mental health services and infant mortality prevention.

Public Health Indicators

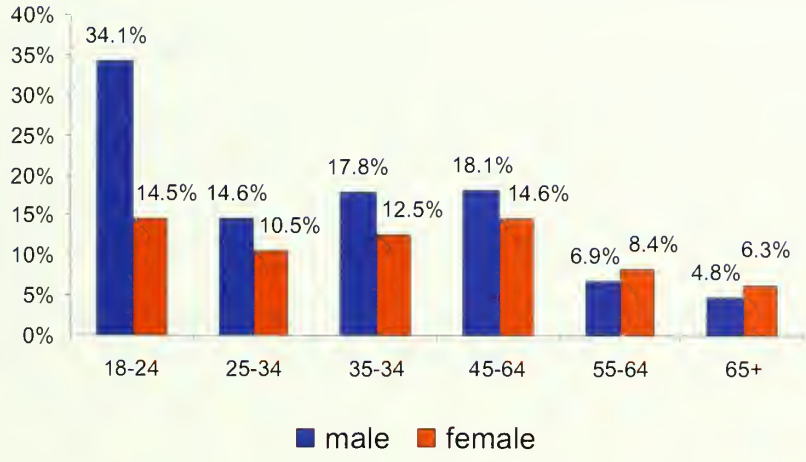
7.1 Universal Access to Health Care

There are several factors that can affect access to health care. They range from health insurance to the availability of health care sources, literacy, language and cultural sensitivity, immigration issues, and transportation.

Percent of Boston residents without health insurance

FIFTEEN PERCENT OF BOSTON RESIDENTS REPORTED THAT THEY WERE WITHOUT HEALTH INSURANCE.

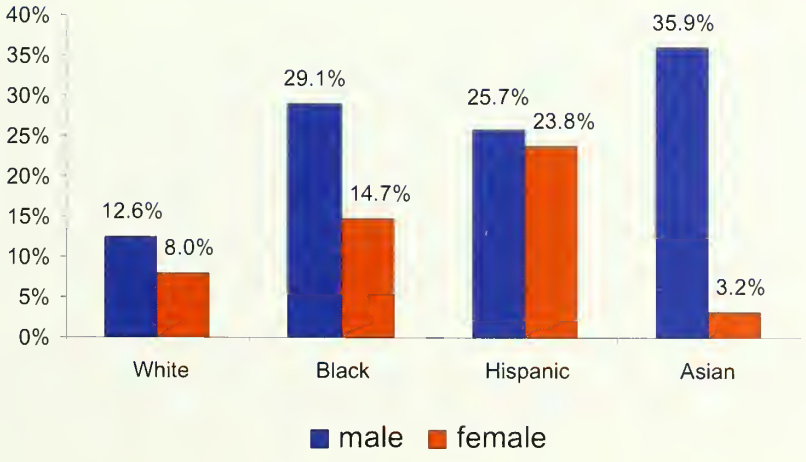
Uninsured Boston residents by gender and age groups, 1994–1997*



* Indicates combined years of data

Data Source: Massachusetts Department of Public Health, Behavioral Risk Factor Survey, Behavioral Risk Factor Surveillance System (BRFSS), 1994-1997
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

Uninsured Boston residents by gender and race/ethnicity, 1994–1997*



* Indicates combined years of data

Data Source: Massachusetts Department of Public Health, Behavioral Risk Factor Survey, Behavioral Risk Factor Surveillance System (BRFSS), 1994-1997
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

What does this mean?

The Behavioral Risk Factor Surveillance Survey (BRFSS) revealed that between 1994 and 1997, almost 15% of Boston respondents said that they were without health insurance. Further questioning revealed that 22% of those respondents had been without health insurance for the previous 6 months, while 25% had been without health insurance for more than five years. Having health insurance coverage that ceased to be offered (40.8%) and losing or changing jobs (40.6%) were the two leading reasons respondents were uninsured. Almost half of those surveyed who were uninsured said that they wanted to see a doctor but did not because of the cost.

Affordability is clearly the main issue for those who are uninsured or who are underinsured through private or public health insurance plans. However, even when insurance coverage is offered, co-payments/deductibles may become constraints for individuals and families. Pre-existing medical conditions further hinder access by making some individuals ineligible for plan coverage. The inability to afford preventive services (e.g., primary care or screenings) makes long-term care even more unaffordable and inaccessible. While Boston has made significant progress compared to other cities, much more can be expected given its extremely rich store of health care resources. Data from the American Medical Association indicate that in 1997, the physician-to-population ratio in the nation as a whole was 285 per 100,000, as compared to 1,058 per 100,000 in Suffolk County.

Percent of Boston's public school students with English as non-primary language

THE PERCENTAGE OF BOSTON PUBLIC SCHOOL STUDENTS SPEAKING A PRIMARY LANGUAGE OTHER THAN ENGLISH IS ON THE RISE.

What does this mean?

It has been found that language and cultural issues are barriers to accessing health care services. In 1998, approximately 37.2%, of all students in Boston Public Schools spoke a primary language that was not English, up from 30% in 1989. This implies an increase in foreign-born families now residing in Boston and points to the importance of cultural and linguistic sensitivity in meeting the needs of Boston's diverse population. Often, hospital staff find that patients bring their children with them as translators.

The Boston Public Health Commission, along with Boston area hospitals, the Mayor's Health Line, Boston's community health centers, and groups such as the Latino Health Institute, have attempted to make language less of a barrier by making public health and education materials available in several languages, employing bilingual staff, and by using interpreters. However, little is known about the adequacy and accessibility of these services in meeting the needs of the city's diverse population.

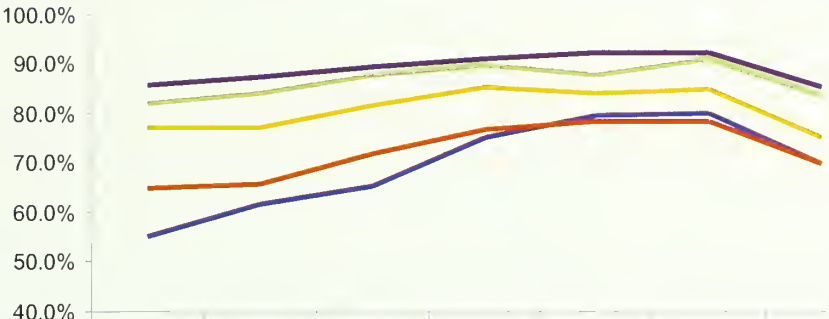
7.2 Investment in Healthy Children

Investment in healthy children is a fundamental building block for a sustainable community and affects the ability of children to become productive adults. A focus on the health outcomes of children is also an important indicator of the health of the child's family unit, lifestyles, and attitudes towards health care.

Percent of women receiving adequate prenatal care in first trimester

BOSTON SHOWED A STEADY RISE IN THE PERCENTAGE OF WOMEN RECEIVING PRENATAL CARE IN THE FIRST TRIMESTER FROM 1990–1995, BUT RATES DECLINED FROM 1995–1996.

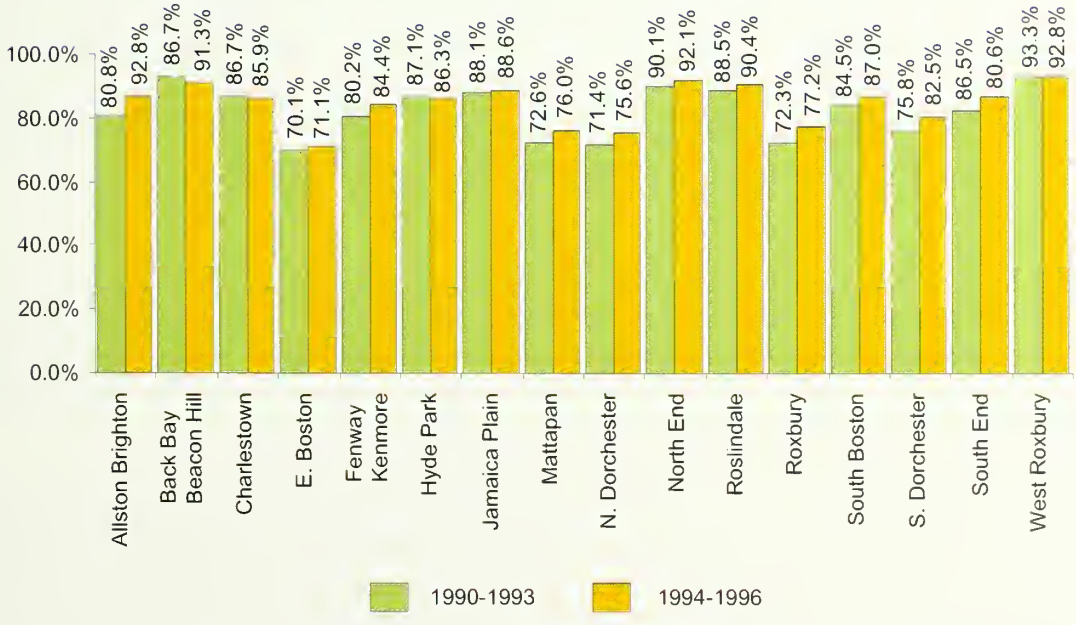
Prenatal care begun in the first trimester, by race and ethnicity, 1990–1996



	1990	1991	1992	1993	1994	1995	1996
S.E. Asian	55.1%	61.7%	65.2%	75.1%	79.5%	80.1%	69.7%
Other API	82.1%	84.1%	87.8%	89.8%	87.6%	91.1%	83.6%
Black	64.7%	65.7%	71.7%	76.9%	78.2%	78.5%	69.9%
Hispanic	77.2%	77.1%	81.8%	85.3%	84.2%	84.7%	75.2%
White	85.8%	87.2%	89.5%	91.0%	92.4%	92.2%	85.3%
All Boston	75.4%	76.5%	80.6%	83.9%	84.8%	85.2%	76.0%

Source: Massachusetts Department of Public Health data tape file of birth certificates

Prenatal care begun in the first trimester, by neighborhood, 1990–1993 and 1994–1996



Source: Massachusetts Department of Public Health data tape file of birth certificates

What does this mean?

Prenatal care ensures better pregnancy outcomes because it allows for issues to be discovered and treated early in a pregnancy. Prenatal care visits also provide caregivers with the opportunity to educate mothers about lifestyle choices that could affect the health of their developing baby.

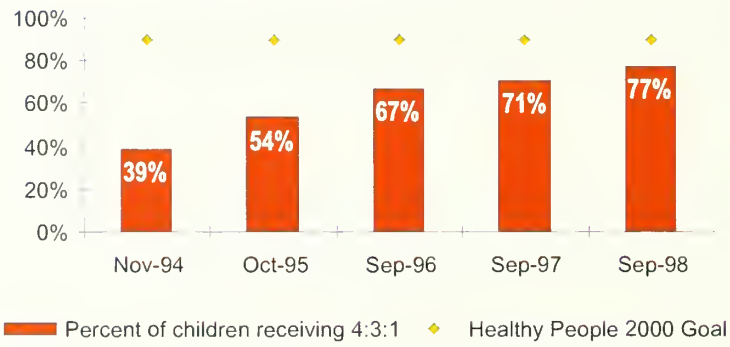
The percentage of Boston mothers who received prenatal care during the first trimester increased from 75% in 1990 to 85% by 1995. During these five years, white mothers consistently showed the highest percentages, followed by Asians, Latinos, blacks and Southeast Asians.

During the periods 1990–1993 and 1994–1996, Boston's neighborhood analysis shows that West Roxbury, Back Bay, the North End, Jamaica Plain, and Roslindale had the highest percentages of women receiving prenatal care in the first trimester, while the lowest percentages were observed in Mattapan, North Dorchester, South Dorchester, Roxbury, and East Boston.

Up-to-Date Vaccinations in Boston

BOSTON AND MASSACHUSETTS LEAD THE NATION IN THE PERCENTAGE OF CHILDREN VACCINATED.

Immunization coverage (4:3:1 Vaccine Series**) among children ages 24-35 months in Boston Immunization Information System (BIIS), 1994–1998*



* Indicates combined years of data

**The 4:3:1 vaccine series refers to 4 doses of vaccines for diphtheria, pertussis, and tetanus; 3 doses of the oral polio vaccine; 1 dose of the measles, mumps, and rubella vaccine

Data Source: BIIS data set, Communicable Disease Control Program, Boston Public Health Commission

Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

What does this mean?

Significant decreases in morbidity and mortality have occurred in the United States as a result of widespread immunization of children for vaccine-preventable diseases including measles, diphtheria, tetanus, pertussis, polio, mumps, rubella, hepatitis B, Haemophilus influenza type-b, and varicella. Complete immunization against these common diseases requires at least four visits to a health care provider by the time a child reaches the age of two.

The Centers for Disease Control (CDC) monitors how well the country is doing with regard to vaccination coverage among children ages 19–35 months through its National Immunization Survey. The survey measures two common vaccination series delivered by health care providers. The first, often referred to as 4:3:1, involves 4 doses of diphtheria, pertussis and tetanus (DTP or DTaP), 3 doses of oral polio vaccine (OPV), and 1 dose each of measles, mumps and rubella vaccine (MMR). The second series, often referred to as 4:3:1:3, involves 4:3:1 plus 3 doses of Haemophilus influenza type-b (Hib).

1997 data from this survey reveal that national coverage of 4:3:1 and 4:3:1:3 remained stable at 78% and 76%, respectively. Boston's coverage rate for 4:3:1 was 88%, and 86% for the 4:3:1:3.

Boston's electronic registry system (BIIS: the Boston Immunization Information System) records immunization data on all children who receive immunizations as reported by 26 Boston primary care providers. Data from this registry through September of 1998 indicates that 77% of all children registered in BIIS aged 24 to 35 months were considered to have up-to-date vaccinations by 24 months of age. Boston is steadily moving toward the Healthy People 2000 goal of having 90% of all children fully immunized by the age of 24 months.

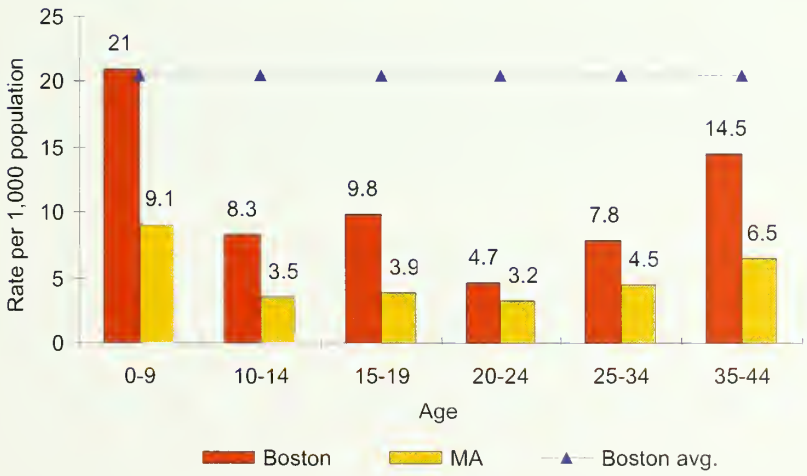
7.3 Commitment to Preventive Health Strategies

Commitment to preventive health strategies can go a long way towards reduction in costs of health care and improving the health of residents. This requires ensuring access to health care for all, as well as, targeted educational campaigns about health risks among people of different genders, races and ethnicities; promoting the benefits of early detection and treatment for diseases; and strategies for preventing societal problems related to the accessibility of firearms, drugs, and alcohol.

Rate of preventable hospitalizations by age

RATE OF PREVENTABLE HOSPITALIZATIONS IN BOSTON WERE HIGHEST FOR RESIDENTS AGES 0–9 AND 45 AND OVER.

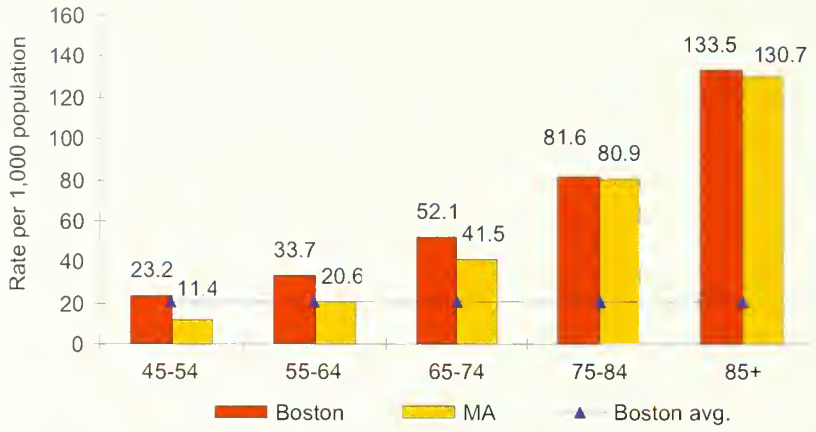
Preventable hospitalization average annual rates among ages 0–44, by age groups, Boston and Massachusetts, 1994–1997*



* Indicates combined years of data

Note: Line represents Boston average rate of 20.5
Data Source: Massachusetts Health Data Consortium, Inc., Massachusetts Division of Health Care Finance and Policy; Acute Hospital Case Mix, 1997
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

Preventable hospitalization average annual rates among ages 45+, by age groups, Boston and Massachusetts, 1994–1997*



* Indicates combined years of data

Note: Line represents Boston average rate of 20.5
Data Source: Massachusetts Health Data Consortium, Inc., Massachusetts Division of Health Care Finance and Policy; Acute Hospital Case Mix, 1997
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

What does this mean?

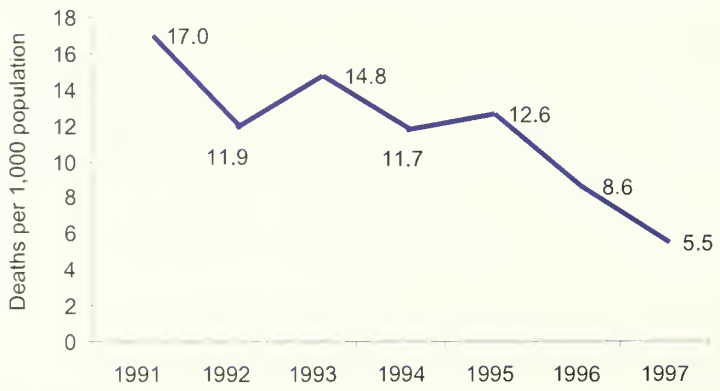
Hospital admissions that could have been avoided and which result from delaying or not receiving timely and appropriate primary care for chronic conditions or other health problems indicate that a patient may have had difficulty accessing care. There are 25 ambulatory-care-sensitive medical diagnoses which can generally be managed in an outpatient setting with early detection and treatment. Therefore, hospitalization for these diagnoses is considered preventable. Among these diagnoses are diabetes, hypertension, gastroenteritis, and asthma.

In Boston, 17% of all hospitalizations from 1994 through 1997 were preventable. Boston residents ages 0–9 (21.0 children per 1,000) and those ages 45 and over (ranging from 23.2 persons per 1000 for ages 45–54 to 133.5 persons per 1,000 for ages 85 and over) had the highest preventable hospitalization rates. Among those ages 0–9, the high rate can mostly be attributed to asthma.

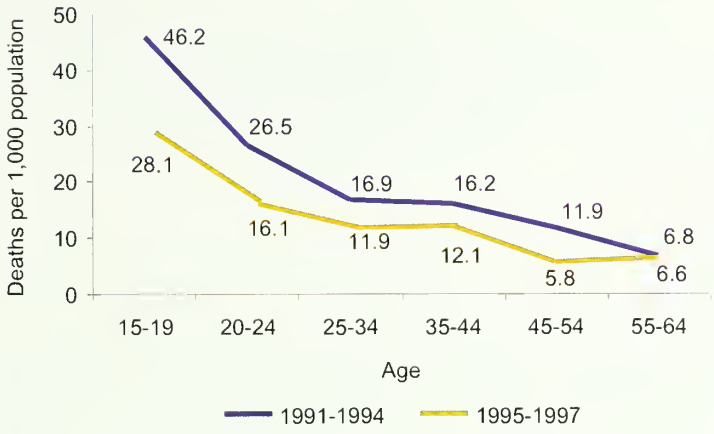
Homicide by age groups and by race/ethnicity

THE BOSTON HOMICIDE RATE DECLINED FROM 17.0 HOMICIDES PER 100,000 POPULATION IN 1991 TO 5.5 IN 1997. IN 2000, HOWEVER, IT HAS BEGUN TO INCREASE.

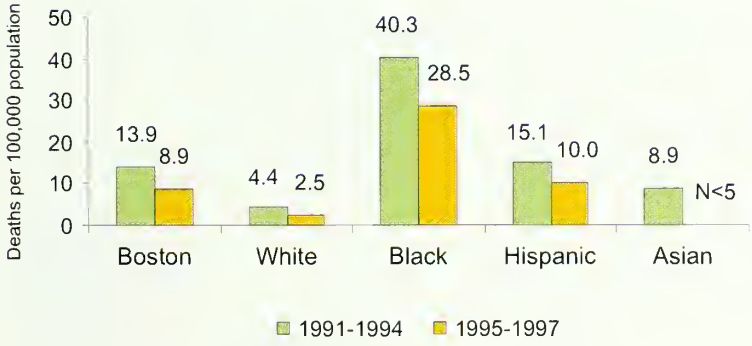
Homicide mortality age-adjusted rates by year, Boston 1991–1997



Homicide mortality by age groups, Boston 1991–1994 and 1995–1997



Homicide mortality age-adjusted rates by race and ethnicity, Boston 1991–1994 and 1995–1997



Data Source: Boston resident deaths, Massachusetts Department of Public Health
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

What does this mean?

Risk factors for homicide (a death intentionally caused by a person other than the deceased) include alcohol and drug use, availability of firearms, and the cultural acceptance of firearms. Young men in low-income urban areas are most at risk for being involved in homicides. This points to a need for more preventive efforts to address violence-related mortality via programs aimed at a variety of age cohorts, ethnic/racial groups, and socioeconomic segments of the population.

In the United States, homicide rates overall are declining. However, one-third of all homicide victims are between the ages of 15 and 24. Homicide is the leading cause of death for black men in this age group and is the third leading cause of death for all black men.

In Boston, the age-adjusted homicide rate decreased 67.6% from 1991 to 1997. Despite declining homicide rates, homicide was still the leading cause of death among Boston adolescents and young adults (excluding the broad category of "All Injuries"). During the period 1991 to 1997, the age-adjusted homicide rate among men (20.3 per 100,000) was 83% higher than for women (3.5 per 100,000). During the period 1991 to 1997, blacks had the highest homicide rate (35.3 per 100,000), followed by Latinos (12.9 per 100,000), Asian/Pacific Islanders (5.4 per 100,000), and whites (3.6 per 100,000).

7.4 Healthy Behaviors

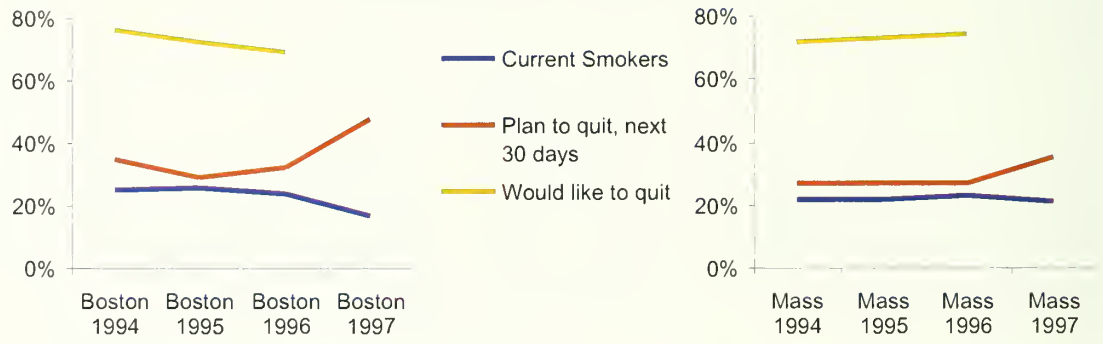
Healthy behaviors that prevent disease and injury are the foundation for public health. Boston hopes to help reduce participation in risky behaviors by developing educational campaigns and programs that prevent unhealthy choices and motivate residents toward healthier lifestyles. For instance, smoking, alcohol, and drug use are considered to be causes of preventable deaths.

Percent of Boston residents who participate in risky behaviors

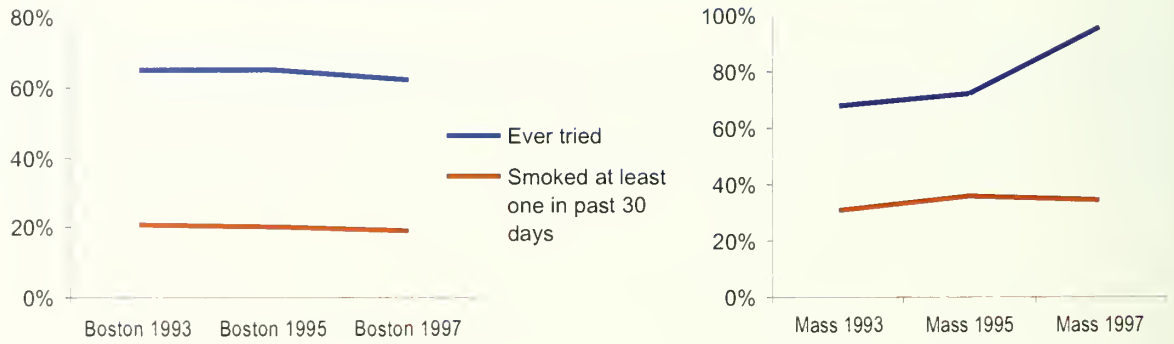
Smoking rates

SMOKING IS ON THE DECLINE IN BOSTON; ALCOHOL AND DRUG USE ARE THE EIGHTH AND TENTH LEADING CAUSES OF MORTALITY IN THE CITY.

Cigarette smoking rates among adults ages 18 and over, Boston and Massachusetts, 1994–1997



Cigarette smoking rates among high school students, Boston and Massachusetts, 1993, 1995, and 1997



Data Source: Massachusetts Department of Public Health, Behavioral Risk Factor Survey, Behavioral Risk Factor Surveillance System (BRFSS), 1994-1997
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

What does this mean?

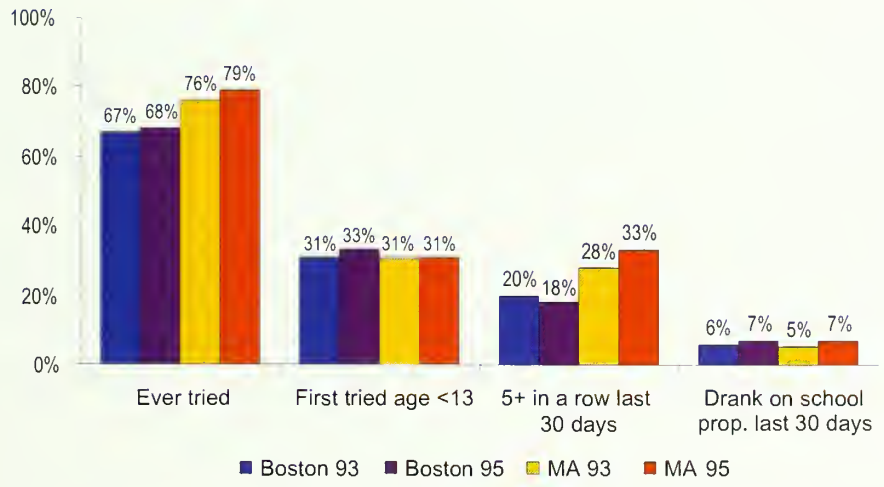
Diseases/conditions that are associated with smoking include coronary heart disease, peptic ulcer disease, cancer, infertility, miscarriage, and risk of low-birth-weight babies. Impaired physical, emotional, and intellectual development of infants, as well as Sudden Infant Death Syndrome (SIDS) and impaired infant-lung functioning at birth, are also associated with smoking. Public health efforts to reduce the number of individuals who smoke can significantly improve the health and life expectancy of those who change their behavior.

In the United States, smoking is the leading cause of preventable death, claiming almost 500,000 lives annually. The number of Boston smokers declined from 25% in 1994 to 17% in 1997. The number of Boston residents who planned to quit in the next thirty days was on the rise, from 35% in 1994 to 48% in 1997, and similar percentages apply across the state. The Youth Risk Behavior Survey revealed that fewer students claimed to have tried smoking in 1997 (62%) than in 1993 and 1995 (65%). Similarly, the number of students who stated that they smoked a whole cigarette for the first time before the age of 13 declined from 21% in 1993 to 18% in 1997.

Substance abuse rates

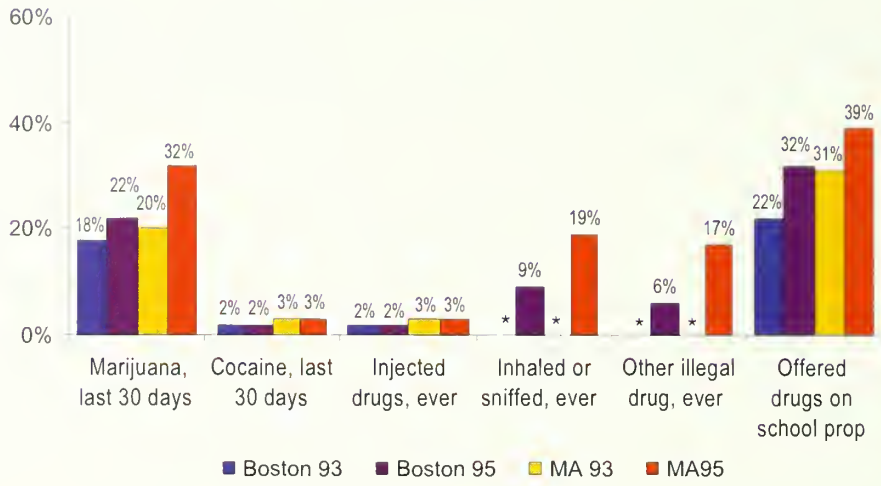
SUBSTANCE ABUSE AMONG BOSTON YOUTH DECLINED FROM 1993 TO 1995.

Self-reported alcohol use by public high school students, 1993 and 1995



Source: Massachusetts Department of Public Education and Boston Public Schools, Youth Risk Behavior Survey

Self-reported illegal drug use by public high school students, 1993 and 1995



Source: Massachusetts Department of Public Education and Boston Public Schools, Youth Risk Behavior Survey

What does this mean?

Substance abuse, in the form of both alcohol and drug use, can lead to numerous adverse health outcomes. Among pregnant mothers, drug and alcohol use can lead to spontaneous abortions, fetal distress, pre-term birth, low birth-weight, small size for gestational age, and delays in infant physical and mental development. In adults, chronic alcohol abuse can cause cirrhosis of the liver, as well as cancers of the liver, esophagus, throat, and larynx. Substance abusers are at greater risk for accidents, injuries, and sexually transmitted diseases.

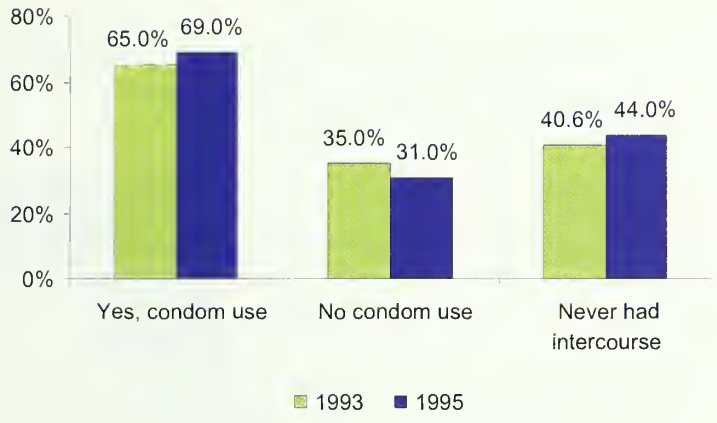
Approximately 74 million Americans have tried an illicit drug at least once in their lifetime according to a 1996 study. During the study year, 23 million Americans claimed to have used an illicit drug at least once. Illicit drugs identified by respondents included, in descending order of use: marijuana; cocaine; crack; and heroin. Between 1979 and 1996, the number of individuals using illicit drugs in the United States declined from 25.4 million to 13 million. Despite the declines in drug use among the general population, drug use among adolescents and young adults appears to be increasing nationally. Between 1992 and 1997, the use of marijuana increased from 11.9% to 23.7% among high school seniors; from 8.1% to 20.5% among tenth graders; and from 3.7% to 10.2% among eighth graders.

Massachusetts ranks the highest among all states in drug and alcohol addiction among adolescents, according to an August 2000 survey by the U.S. Department of Health and Human Services cited in the Boston Globe. The Youth Risk Behavior Survey data shows that Boston students self-reported lower rates of illegal drug use than other Massachusetts students in 1993, 1995, and 1997. Risk factors for drug and alcohol abuse among adolescents and young adults include having a perception that drug and alcohol use is not harmful, a family history of substance abuse, lack of a close relationship with a parent, having a mental disorder, having been a victim of sexual and physical abuse, low academic achievement, and poor self-image. Public health efforts focusing on the family unit and on education to alter risky behaviors promote healthier lifestyles for individuals in this age group.

Percent of Boston youth who participate in healthy behaviors

YOUTH RISK BEHAVIOR SURVEY DATA FOR BOSTON SHOW AN INCREASE IN THE NUMBER OF STUDENTS WHO HAVE NEVER HAD INTERCOURSE, FROM 40.6 IN 1993 TO 44.0 IN 1995 AND AN INCREASE IN CONTRACEPTIVE USE AMONG SEXUALLY ACTIVE STUDENTS.

Self-reported contraceptive use by public high school students, 1993 and 1995



Source: Youth Risk Behavior Survey. Massachusetts Department of Public Education and Boston Public Schools

What does this mean?

The percentage of Boston Public School students who are not sexually active is increasing. Sexually active adolescents who have intercourse without the use of contraception are at risk for becoming pregnant and contracting sexually transmitted diseases. For the majority of adolescents, pregnancy is an undesired outcome of sexual intercourse. Both age and socioeconomic factors place young mothers-to-be in the high-risk pregnancy category, which can result in such conditions as low birth-weight babies with developmental problems.

Condoms and birth control pills are the most common forms of contraception used by sexually active adolescents. The Youth Risk Behavior Survey data for Boston during the period from 1993–1995 shows an increase in the number of students who have never had intercourse. For sexually active adolescents during the same time frame, the data shows an increase in the percentage of students reporting condom use. Public health educators agree that continued education targeted to this population is necessary to discourage high-risk behaviors that could significantly impact the health status of this age group.

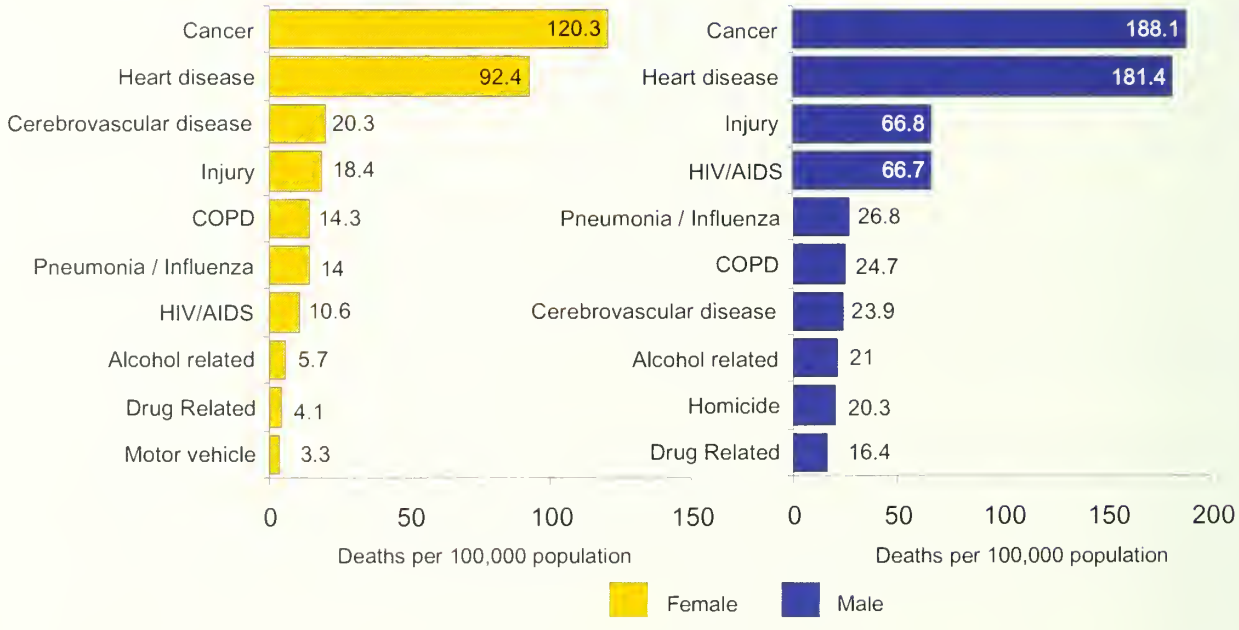
7.5 Low Death Rates

Public health officials, researchers, and health care providers look to the leading causes of death in an effort to intervene through programs or clinical trials that seek to reduce mortality and educate the general public from a preventive-care perspective.

Leading causes of death

CANCER AND HEART DISEASE REMAIN THE LEADING CAUSES OF DEATH IN THE CITY, STATE, AND NATION.

Leading causes of death, average annual rates by gender in Boston, 1991–1997



All cancers include colo-rectal, breast, lung, prostate, as well as, other types of cancers
Data Source: Boston resident deaths, Massachusetts Department of Public Health
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

Leading causes of death, age-adjusted rates in Boston, 1991–1997

Age Group	Causes of death	Rate per 100,000	Age Group	Causes of death	Rate per 100,000
1-9	Injuries (all)	9.0	45-54	Cancer (all)	199.4
	Congenital anomolies	4.1		Heart Disease	140.4
	Cancer (all)	2.9		HIV/AIDS	77.8
10-14	Injuries (all)	7.0	55-64	Cancer (all)	476.4
	Cancer (all)	3.8		Heart Disease	320.3
15-19	Injuries (all)	56.9		COPD	44.5
	Homicide	38.5	65-74	Cancer (all)	945.0
	Motor vehicle related	8.4		Heart Disease	723.4
20-24	Injuries (all)	37.2		COPD	132.8
	Homicide	22.0	75-84	Heart Disease	1,748.8
	Suicide	5.2		Cancer (all)	1,446.2
25-34	HIV/AIDS	47.7		Cerebrovascular Disease	350.7
	Injuries (all)	41.7	85+	Heart Disease	5,281.6
	Homicide	14.8		Cancer (all)	2,007.3
35-44	HIV/AIDS	133.7		Pneumonia/Influenza	1,697.2
	Injuries (all)	70.2			
	Cancer (all)	45.7			

The total number of deaths was 34,033 during 1991-1997

Data Source: Massachusetts Department of Public Health, Boston resident deaths

Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

What does this mean?

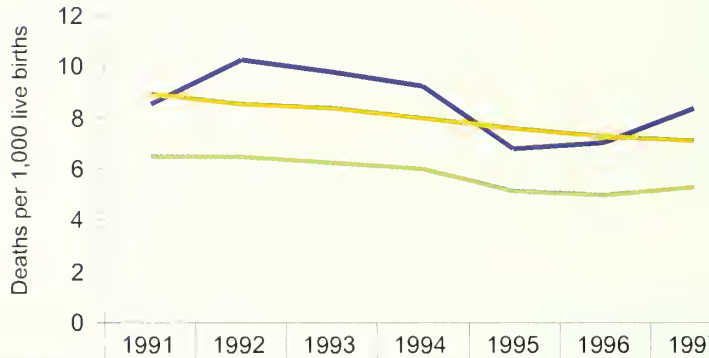
In the United States, data for 1997 reveal that heart disease, cancer, and cerebro-vascular disease are the three leading causes of death. Boston data show the leading causes of death, in descending order, to be cancer (all), heart disease, injury (all), HIV/AIDS, cerebro-vascular disease, (pneumonia/ influenza, Chronic Obstructive Pulmonary Disease (COPD), alcohol-related, homicide, and drug-related. While cancer (all) and heart disease are the two leading causes of death for both men and women in the city, more men than women die as a result of injury (all) and HIV/AIDS (66.8 per 100,000 males vs. 18.4 per 100,000 females for all injuries; and 66.7 per 100,000 males versus 10.6 per 100,000 females for HIV/AIDS).

Cancer (all) was the leading cause of death among all racial/ethnic groups. For the period 1991–1997, blacks had the highest rate (178.8 per 100,000), followed by whites (146.1), Asians (115.1), and Latinos (60.9).

Infant mortality rates by race

IN 1998, INFANT MORTALITY RATES BEGAN TO DROP AFTER A RISE BETWEEN 1995 AND 1997. RACIAL DISPARITIES ARE A CONTINUING CONCERN.

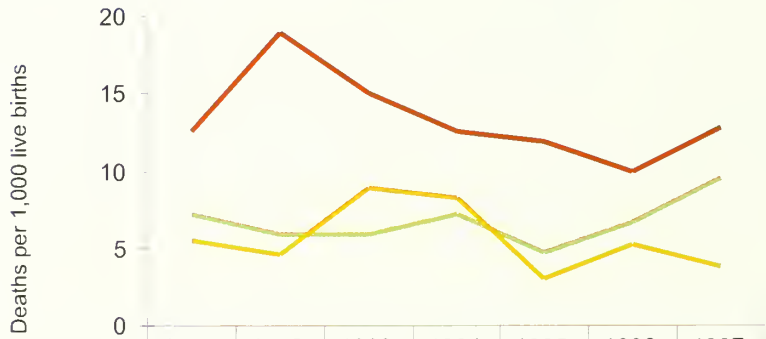
Infant mortality, Boston, Massachusetts, and United States by year, 1991–1997



	1991	1992	1993	1994	1995	1996	1997
Boston	8.5	10.3	9.8	9.2	6.8	7	8.4
MA	6.5	6.5	6.2	6	5.1	5	5.3
US	8.9	8.5	8.4	8	7.6	7.3	7.1

Source: Massachusetts Department of Public Health, Boston resident births and deaths
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

Infant mortality by year and race and ethnicity in Boston, 1991–1997



	1991	1992	1993	1994	1995	1996	1997
White	7.2	5.9	5.9	7.2	4.7	6.7	9.5
Black	12.6	19	15	12.5	11.9	9.9	12.8
Hispanic	5.5	4.6	8.9	8.2	3	5.2	3.8

Note: There were less than five deaths among Asian/Pacific Islanders; a rate could not be presented
Source: Massachusetts Department of Public Health, Boston resident births and deaths
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

What does this mean?

Infant mortality, or the number of deaths among infants less than one year old, serves as a key indicator of a community's health status because it captures a number of factors, including maternal health, access to medical care, and socioeconomic conditions. Infant deaths are most likely to occur

as result of low birth-weight, pregnancy complications, sudden infant death syndrome (SIDS), lack of access to health care, and socioeconomic status.

In the United States, the infant mortality rate declined between 1995 and 1996, with congenital anomalies and SIDS being the leading causes of infant death. In Boston, however, the leading causes of infant mortality in 1997 were perinatal conditions (53.0% — low birth-weight, maternal complications during pregnancy, and respiratory distress), congenital anomalies (16.7%), other causes (21.2%) and SIDS (7.6%). The infant mortality rate for blacks is significantly higher than for whites, Latinos, and Asian/Pacific Islanders. In 1997, the infant mortality rate for blacks was 12.8 per 1,000 live births, versus 9.5 for whites and 3.6 for Latinos. This discrepancy continues to be a concern. Percentages of low birth-weight (less than 5.5 pounds.) and very low birth-weight babies (less than 3.3 pounds.) are also consistently higher for blacks than for other racial and ethnic groups. 1998 data showed a decline in infant mortality rates in Boston following an increase from 1995 to 1997.

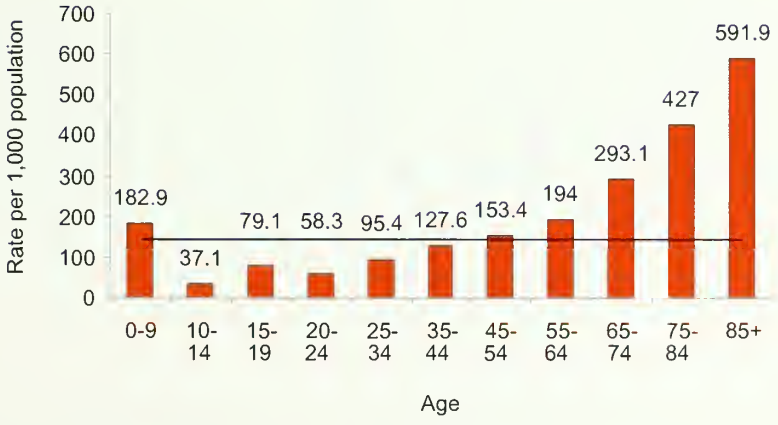
7.6 Low Rates of Disease

Low rates of disease are an indicator of the overall health of the community and of the effectiveness of strategies for care being provided. They also tell us about the attitudes of the citizenry towards preventive health strategies and their use of services such as screening, education, and support. Causes of hospitalization are helpful in assessing the health status of the community and in prioritizing the medical needs to be addressed by public and private institutions.

Leading causes of hospitalization by gender and age in Boston

PREGNANCY, BIRTHS, PSYCHOSES, AND SUBSTANCE ABUSE ARE THE LEADING CAUSES OF HOSPITALIZATION IN THE CITY.

Hospitalization average annual rates by age group in Boston, 1994–1997*

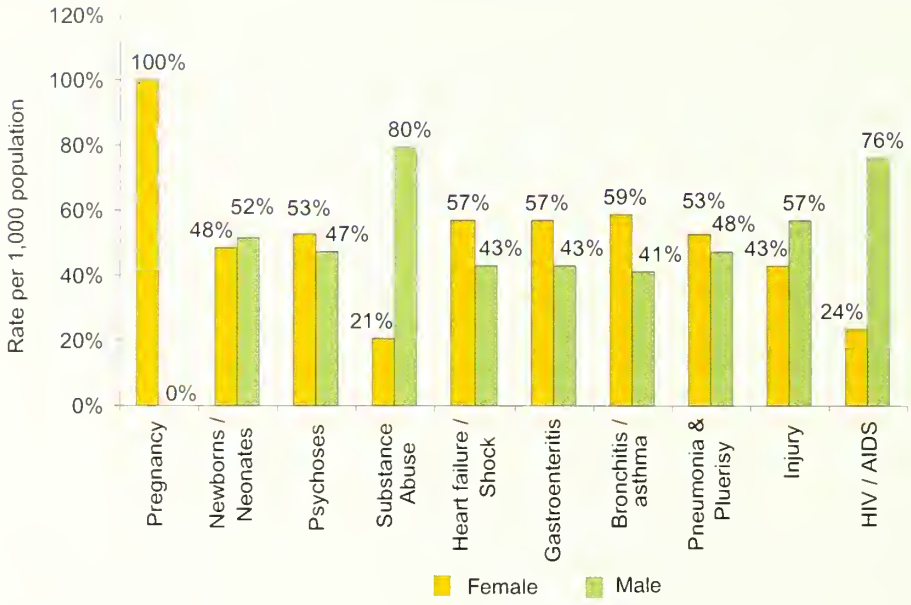


* Indicates combined years of data

Note: Line represents Boston average rate of 145.1

Data Source: Massachusetts Health Data Consortium, Inc., Massachusetts Division of Health Care Finance and Policy, 1997 Acute Hospital Case Mix Data Analysis. Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

Leading causes of hospitalization by gender in Boston, 1994–1997*



* Indicates combined years of data

Data Source: Massachusetts Health Data Consortium, Inc., Massachusetts Division of Health Care Finance and Policy, 1997 Acute Hospital Case Mix
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

What does this mean?

Hospitalization data provide valuable information regarding the level of treatment provided, the patient's length of stay, the patient's age, gender/ethnicity, and the type of insurance used to cover the services received. All of this is useful in assessing the level of disease within the population and the types of resources required to lower the disease rate.

In the United States, pregnancy and pregnancy-related conditions, heart disease, HIV, pneumonia, injury, cancer, and psychoses were among the leading causes of hospitalization. In Boston, during the period 1994–1997, the leading causes of hospitalization were pregnancy and pregnancy-related conditions, birth, psychoses, and substance abuse. Together, these conditions resulted in 41.4% of all hospitalizations in the city. Data reveal that perhaps some portion of the pregnancy admissions (e.g., those that did not result in birth, but which involved pre-term complications) could be reduced through better prenatal care efforts. Other leading causes of hospitalization point to the need for additional mental health programs and substance abuse interventions.

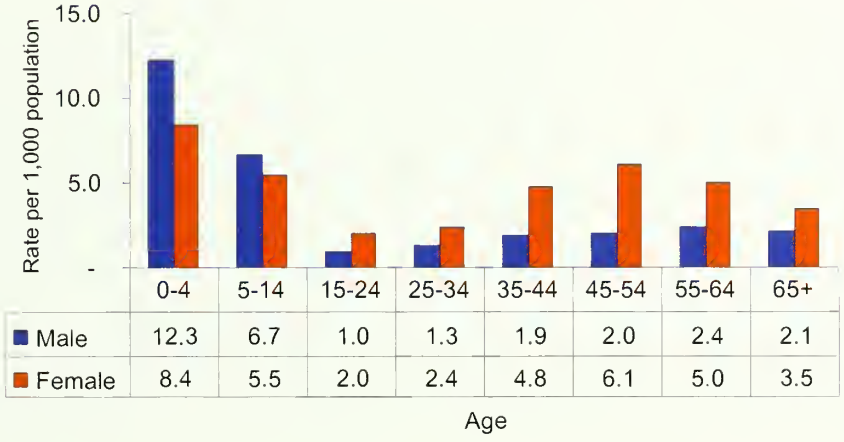
7.7 Low Rates of Environmental Hazards

The environment is everything around us. It affects us and is affected by us. It includes the air we breathe — both inside our homes and outdoors, the water we drink and use, the land we live and play on, the places where our food grows, and the places where our food is processed and shipped. Problems related to environmental pollution, waste management, chemicals, and toxic materials developed and used before their negative effects were known, (such as lead paint, pesticides, and cigarettes), as well as technologies such as genetic engineering (about which we still know little), may impact us in ways that harm our health. Ensuring low rates of environmental hazards in our communities can protect us from environmentally related diseases that are on the rise worldwide. Asthma, which is increasing locally and nationally, is thought to be an indicator of environmental health hazards.

Asthma hospitalization, average annual rates by gender and age groups

ASTHMA RATES ARE HIGHER IN BOSTON THAN IN MASSACHUSETTS

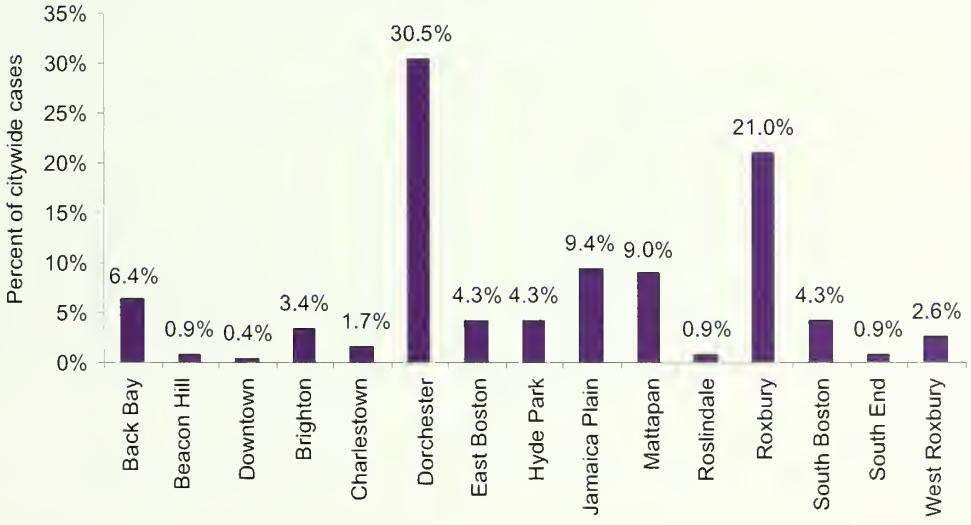
Asthma hospitalization average annual rates by gender and age groups, 1997



	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+
Male	12.3	6.7	1.0	1.3	1.9	2.0	2.4	2.1
Female	8.4	5.5	2.0	2.4	4.8	6.1	5.0	3.5

Data Source: Massachusetts Health Data Consortium, Inc, Massachusetts Division of Health Care Finance and Policy, 1997 Acute Hospital Case Mix
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

Asthma hospitalization average annual rates by neighborhood, 1997



Data Source: Massachusetts Health Data Consortium, Inc, Massachusetts Division of Health Care Finance and Policy, 1997 Acute Hospital Case Mix
Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

What does this mean?

Asthma is a chronic inflammatory lung disease characterized by recurrent but reversible symptoms of airflow obstruction. It is the fastest growing environmental health problem in the United States. With medication and avoidance of environmental triggers (e.g., house dust mites, cockroaches, mold, animal dander), symptoms can be reduced. Secondhand smoke, upper respiratory viral infections, and some air pollutants can also lead to an asthma attack. Because asthma is considered one of the diag-

noses that can effectively be managed in the outpatient setting, asthma hospitalization rates are an especially good indicator for the effectiveness of preventive care services and practices.

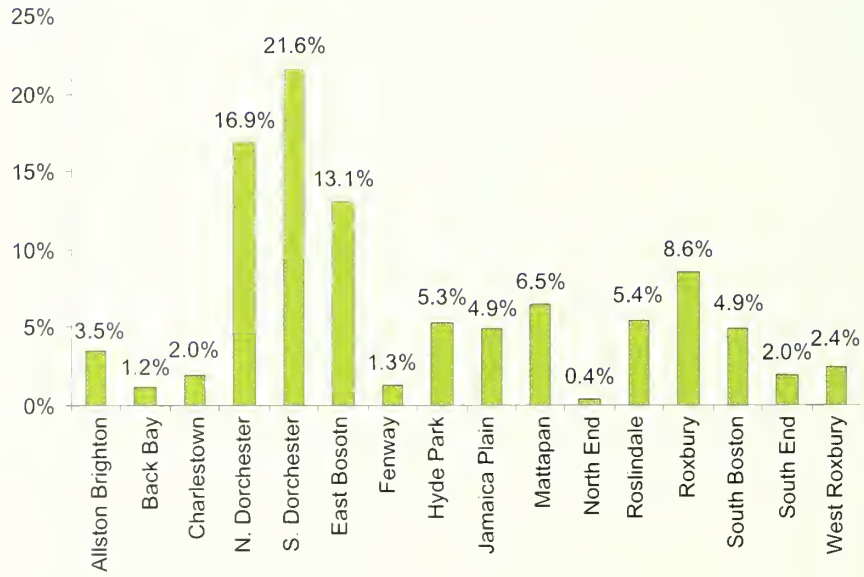
Nationally, the number of individuals with asthma increased 24.1%, from 13.7 million in 1993 to 17 million in 1998. In 1998, an estimated six million children under the age of 18 (7.3%) had asthma. The most rapid increase has occurred in children under five, with rates increasing by over 160% over the past 15 years.

Asthma is a major health concern in Boston. It accounted for 3.5 hospital admissions per 1,000 Boston residents during the period from 1994–1997. This was double the rate of asthma admissions for the state as a whole. Boston asthma hospitalization rates vary by age and gender, with children having the highest rates and adolescents and young adults the lowest. Rates for children are substantially higher than for adults. For example, between 1994–1997, the rate for children under the age of five was more than twice that of adults ages 45–54 and six times that of adults ages 25–34. Boston Emergency Medical Services (EMS) is addressing asthma by conducting a pilot program for the administration of Albuterol, a drug used to safely treat asthmatics.

Percent of children with lead poisoning, by neighborhood

DESPITE DECLINES IN BLOOD LEAD LEVELS AMONG BOSTON CHILDREN, NEIGHBORHOOD DISPARITIES ARE CAUSE FOR CONCERN.

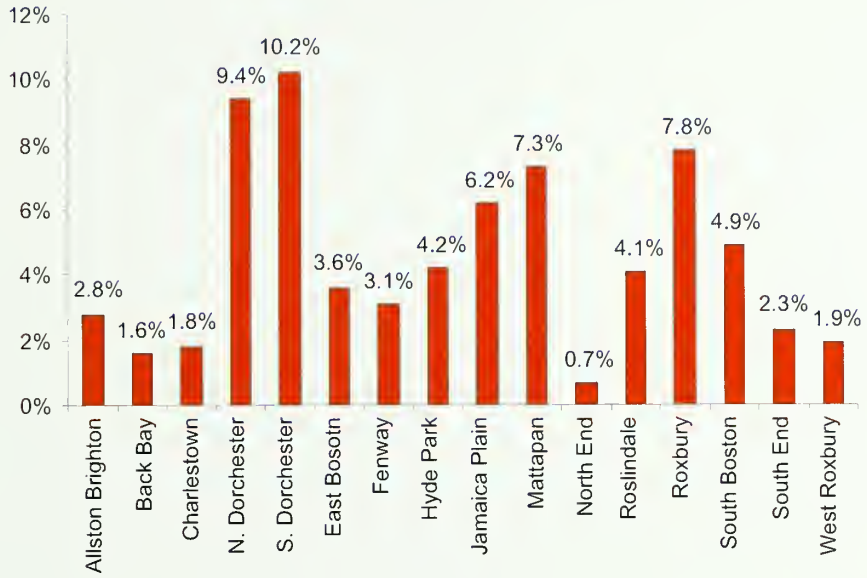
Distribution of all screenings conducted for lead poisoning among children ages 6 and under, by neighborhood, 1997



Data Source: Boston Public Health Commission, Office of Environmental Health, Lead Screening Data

Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

Percent of all cases of lead poisoning* among children ages 6 and under by neighborhood, 1997



*Blood Level of 10ug/dl or greater

Data Source: Boston Public Health Commission, Office of Environmental Health, Lead Screening Data

Data Analysis: Rates and percentages calculated by the Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems

What does this mean?

Lead poisoning is the most common pediatric environmental health problem in the United States. Reducing the blood lead level of children under the age of six is one of the environmental objectives included in the federal government's Healthy People 2000 report and goals.

According to a survey conducted by the Center for Disease Control from 1991 to 1994, blood lead levels in the United States have been declining since 1976 reflecting the implementation of legislation prohibiting the use of lead in paint, and later, the use of lead in gasoline. This survey also revealed that higher-than-normal blood lead levels were most commonly found among blacks and Mexican-Americans and, in general, lower-income families, people living in metropolitan areas with a population of more than one million, and those living in older housing.

Although blood lead levels are on the decline in Boston, lead poisoning remains a major health concern. While screening efforts are evenly distributed throughout the city, percentages of children screened vary by neighborhood. Dorchester (North and South), East Boston, and Roxbury had the highest percentages of children who were screened. The majority of elevated blood levels (10ug/dl or greater) among children screened were found in Dorchester (North and South), Mattapan, Roxbury and Jamaica Plain. Severely high blood lead levels (20ug/dl or greater) were found in children residing in Dorchester (North and South), Mattapan, Jamaica Plain and Roslindale. These are all Boston neighborhoods with a high percentage of children overall, with older housing stock, and with a disproportionate number of families with children living in poverty. Elevated lead levels have been shown to thwart development.

SECTION EIGHT

Public Safety

Vision

A community where strong social networks, a well maintained physical environment, investment in youth, and effective collaboration at all levels promote safety at home and on the street.

Indicators of a Safe City	Measures	How Is Boston Doing?
8.1 **Low Crime Rates**	■ Trends in reported criminal activity in Boston vs. other cities	■ Boston ranked as the 12th safest large city in the country in 1998, the 17th safest in 1999
	■ Trends in reported city-wide crime – Juvenile crime – Violent domestic crimes – Hate crimes – Crimes in Public Housing	■ Boston's citywide crime rate fell for the 9th year in a row in 1998. Since then, crime has increased in several categories
	■ Trends in reported crime by neighborhood – Violent crime (murder, rape, robbery, aggravated assault) – Property crime (burglary, larceny, vehicle theft)	■ Violent and property crime decreased in most neighborhoods; several saw a marginal increase. Since 1990, rates are down significantly in all neighborhoods, with violent crime down by 48%
8.2 **Perception of Public Safety**	■ Cleanliness rating and repair of the public realm, by neighborhood	■ See Environment section
	■ Public perception of safety, by neighborhood	■ In 1999, over 80% of residents surveyed perceived a drop in crime in the city. Youth surveyed indicate an increased perception of safety on streets and in their neighborhoods
8.3 **Strong Civic and Social Networks**	■ Percent of residents who trust their neighbors, by neighborhood	■ In 1999, over 80% of the residents surveyed trusted their neighbors
	■ Juvenile population ages 5-17 years years vs. juvenile arrest rates by neighborhood	■ Juvenile arrests decreased 13% between 1998 and 1999. 10 out of 16 neighborhoods saw a decrease
	■ Violent domestic crime, by neighborhood	■ While domestic violence decreased from 1997 to 1998, some neighborhoods saw a marked increase. Rates overall were down in 1999 by 9%
8.4 **Private-Sector Investment in Neighborhoods**	■ Public safety impact on business investment, by neighborhood	■ One-year data does not show any co-relation between investment and public safety
8.5 **Resident Satisfaction with Neighborhood Quality of Life**	■ Quality of life ranking by neighborhood	■ Residents ranked their quality of life from a high of 8.1 in West Roxbury to a low of 6.4 in Roxbury (Scale 10 to 1, with 10=highest)
	■ Respect and trust between residents and Boston police officers	■ Most residents have confidence in police officers to prevent (84%) and solve crimes (85%). About 12% reported a negative experience with an on-duty police officer

Public Safety

Boston is the public safety success story of the nation — enjoying its lowest crime rates in 30 years. However, early warning signs and an increase in the population of young adolescents suggest that Bostonians cannot rest on recent laurels.

Historical Context

Boston in the 1970s and1980s, was marked by increasing rates of violence and fear. Violent crime in Boston peaked in 1990, breaking previous records, with 152 homicides that included many young victims. Guns and crack cocaine were readily available, and high rates of youth violence fueled unease among Boston's residents and caused instability in its neighborhoods.

The public safety crisis in Boston was a catalyst for new thinking and new partnerships. The civic community mobilized, with the police, church leaders, judges, government official,s and community-based groups all coming forward to offer their involvement. Their work was informed by a Harvard University analysis that showed that 1,300 youth or young adults — many of them gang-involved — were responsible for 75% of the homicides in Boston.

Law enforcement, social service agencies and faith-based organizations came together in the early 1990s to construct the carefully crafted "Boston Strategy," which combined enforcement with compassion.

Gang members were warned that acts of violence would be prosecuted, perhaps in federal court. The Boston Police Department also began to search out and arrest juveniles with outstanding warrants. Through Operation Night Light, probation officers checked on curfew compliance for juvenile offenders on probation. The Boston Police Department also used state-of-the-art computer technology to link firearms to crimes and to track down gun runners selling weapons to juveniles.

At the same time, faith-based organizations and social service agencies began to provide support to Boston's youth. Through street workers, counselors, jobs, educational enrichment and recreation, opportunities increased dramatically, showing young Bostonians that adults cared about them. The collaborative strategy led to a significant drop in serious crimes beginning in 1991.

Mobilization and prevention efforts intensified throughout the 1990s, with crime rates decreasing every year and reaching record lows in a number of categories. The strategy also resulted in continued collaboration among public officials and civic leaders, strong community-based coalitions, and adoption of neighborhood policing as Boston's primary approach to crime. Since 1990, serious crime in Boston has fallen to rates not seen for three decades.

Regional Context

Crime rates in all categories are dropping in all regions and in most cities in the United States for the 7th consecutive year — with a 7% drop in serious crime overall. The Northeast and West are leading the nation in the reduction of homicides.

Boston's crime rate is dropping faster than that of comparable cities, without the increase in charges of police brutality that have accompanied crime-fighting efforts in other major cities. Today, violent and property crime in Suffolk County are also decreasing, although at slower rates than in Boston. However, the use of racial profiling by some police departments in Metro-Boston has exacerbated racial tensions.

Citywide Context

Overall, serious crime in Boston's neighborhoods has been decreasing steadily, to the lowest rates since the 1960s (with slight increases in theft between 1998 and 1999). The Boston Police Department began implementing its Neighborhood Policing Program in 1993. They also began to work in concert with the District Attorney's office and the Sheriff's office, the Boston Coalition Against Drugs and Violence, the 10 Point Coalition and other

clergy, the federally funded Safe Neighborhoods Program, workers from the criminal justice system, church- and community-based youth workers, business leaders, parents, and schools across the city.

The number of homicide victims under the age of 25 decreased by 71% between 1993 and 1997. Rates of intentional weapon-related injuries seen in emergency rooms decreased by 48% for 15–19 year olds between 1994 and 1997. There were more than 134,000 fewer serious crimes reported during the 1990s than during the same period in the 1980s, and the number of homicides in 1997 was at the lowest level since 1961. Sexual assault, robbery, and aggravated assault levels were also substantially decreased over the decade, as were firearm-related and property crimes. However, 1999 saw a slight increase in robberies and vehicle thefts.

Boston has experienced a decrease in domestic violence over the past two years, with a 9% decrease between 1998 and 1999. Hate crimes, though remaining at fairly constant levels overall, have intensified in some neighborhoods, particularly in public housing. In 2000, a spate of recent crimes had pushed the number of homicides to twice the number tallied at this time in 1999. Though there is not yet a discernible pattern of increasing violence citywide, it is clear that collaborative efforts to reduce violence must intensify.

Enhanced 911 response and other state-of-the art technology have been installed at the new Police Department headquarters in Lower Roxbury. The city has also trained its Emergency Medical Technicians (EMTs) to detect domestic violence and to offer counseling and referrals. The City of Boston is exploring legal action against gun manufacturers and distributors.

Improved economic conditions and demographic composition theories are often mentioned as factors contributing to Boston's dramatic decrease in crime. However, violent crime increased during the mid-1980s, despite a relatively strong economy and despite a decrease in the proportion of juveniles in Boston ages 14–17 from 1980 to 1990. While these factors may have some impact on crime levels, current statistics indicate that their effects are not consistent. It is sustained and broad-based collaboration among institutional and citizen proponents and support for youth that have yielded the most substantial long-range benefits in the field of public safety.

Neighborhood Focus

Neighborhood policing, or the "Same Cop/Same Neighborhood" strategy, emphasizes qualitative outcomes and measures such as reducing fear and increasing community involvement instead of focusing solely on crime statistics. Neighborhood policing also encourages increased community involvement such as the organization by residents of neighborhood crime watch groups. These groups — 1,003 in 1999 — are dedicated to the motto "Think Small." With assistance from the Boston Police Department's Neighborhood Crime Watch Unit, members encourage neighbors to get to know and help one another, look out for neighborhood children, organize neighborhood events and report to appropriate city departments any minor disturbances and maintenance concerns such as broken street lights and illegal dumping. In conjunction with the Boston Police Department's "Wipe It Clean" campaign, initiated in 1997, many neighborhood groups in Boston have adopted the innovative "broken windows" theory of public safety, helping to remove graffiti, clean up the block and address minor public nuisances before they invite more vandalism and serious crime.

Boston's collaborative approach has resulted in new after-school and summer programs in many neighborhoods. A Drug Diversion Court for first-time offenders, greater visibility and engagement in the lives of youth on the part of religious leaders and congregations, a focused effort to reduce truancy and conflict resolution training in the public schools is helping young people to reexamine their options. The hiring of professional street workers has provided ongoing support and counseling for youth, as well as the capacity for rapid intervention in many neighborhoods, when necessary .

n addition to tens of thousands fewer crimes ommitted, surveys show that Boston residents re much less fearful today than they have been n recent years. In 1974, only about 54% of oston's adult population indicated that they felt afe walking alone at night in their neighborood. In 1995, a similar level of fear was eported. When asked the question again in 999, 78% of Boston residents reported feeling afe out alone in their neighborhood at night. Nearly 80% of residents said they can rely on heir neighbors for help. Surveys of young eople show high levels of perceived safety in chools and communities, though 30–40% of outh report that they don't feel safe on the MBTA, and statewide surveys have shown that ay, lesbian and bisexual youth are three times nore likely than other students to feel unsafe in chool.

n 1999, nearly 500 individuals, including police ersonnel and community partners, participated n a Strategic Planning and Community Mobiization process. This process resulted in a blueprint for the future to address the still marked ifferences among Boston's neighborhoods in esidents sense of safety. While improvements ave been made in all of Boston's neighborhoods n both actual crime rates and residents' perception of safety, some neighborhoods continue to ear a greater burden of violent and property rimes than others. Residents of downtown oston, Roxbury and Dorchester, for example, ill contend with a higher rate of crime than do ther Boston residents, although recent trends now great improvement. (However, in 2000, an ncrease in gun-related crimes in Boston, particularly in eight areas designated as "hot spots," nowed an increase of about 13% by May 2000 ver the 1999 rate.) Clergy engaged with youth ork and others are calling for renewed vigiance and collaboration, with a focus on Boston's sing number of adolescents and increased adult upport for young people.

Remaining Challenges

Boston's greatest challenge remains that of upporting young people throughout their arly and teen years. The cohort of young eople from the ages of 14–24, often cited as a group at risk for committing crimes as well as suicide, is expected to increase over the next decade. Boston is already seeing an increase in violence in the middle schools as well as the recruitment of members of this cohort by gangs from outside the city. The recent spate of gang-related violence has transcended traditional neighborhood boundaries by occurring on public transportation and in public places. Currently, eligibility for most federal- and state-funded programs ends at age twelve, while programs for older youth are often geared to those who have already experienced or committed serious offenses.

- **Boston needs more youth centers as well as more educational enrichment programs and after-school programs, such as Mayor Menino's 2:00–6:00 Initiative, which targets resources on the hours after school when most crimes are committed and when young people need positive activities and support.** This initiative supports and coordinates opportunities and programs for young people in out-of-school time, and requires sustained funding from a variety of sources.

- **Boston's counselors and street workers, overworked and underpaid, need acknowledgment, respect and compensation commensurate with the difficulty and importance of their work** in reducing truancy and crime and enriching the lives and prospects of Boston's youth. In addition, the number of alternative schools and placements for troubled young people must be increased to relieve overburdened schools and community-based programs and allow for focused counseling and assistance.

- **Truancy rates in Boston's high schools must be reduced.** Truancy is an early indicator of future serious problems.

- **Any racial bias and racial profiling in police practices must be identified and corrected.**

- **Disparities in neighborhood crime rates must be addressed to create a greater sense of equity across Boston's neighborhoods and among its racial/ethnic groups.** While more than 80% of black residents report they have

confidence in the police, a percentage that is more than double the national average, disparities remain in perceived quality of life across Boston's neighborhoods, with communities of color reporting the lowest rating.

- **The rate of domestic violence and sexual assault must be curtailed.** According to the Youth Risk Behavior Survey, the percentage of females who reported ever having had sexual contact against their will increased between 1995 and 1997 from 10% to 13%. While public attention on protecting children from sexual abuse has focused on strangers, studies indicate that the vast majority of abusers know their victims. Previous exposure to violence or sexual abuse are risk factors for mental and emotional disorders and for illicit drug use.

- **Bostonians must continue to work collaboratively to reduce the availability of guns as well as current rates of substance abuse.** Substance abuse-related offenses (operating a motor vehicle under the influence of alcohol, disorderly conduct and drug possession) though decreasing, account for the largest number, 34%, of arrests by police officers. Drugs were considered by residents to be the primary cause of crime in Boston in 1998.

- **While reported hate crimes increased between 1993 and 1999, the percentage that resulted in criminal charges being brought decreased 56%, from 21% in 1993 to 9% in 1999, according to the Boston Globe. However, according to the Boston Superintendent of Police and Suffolk County District Attorney, 80% of hate crimes prosecuted now result in conviction, a significant increase.** Statewide, hate crimes are increasing against gays and lesbians (by 62% in 1998) and against Latinos (by 73% in 1998). In Boston, African Americans were most often the victims of hate crimes. Hate crimes against African Americans grew significantly, by 45% between 1998 and 1999, while dropping for all other groups including gays and lesbians. We must all create a climate that deems violent acts of prejudice unacceptable.

- **When asked about the most significant problems in their neighborhoods in a citywide survey in 1999, residents pointed to larceny from motor vehicles (car break-ins) as the dominant crime concern,** followed by motor vehicle theft and vandalism. Residents today are also concerned about litter, youth loitering and noise.

Source: This story is drawn in part from the 1998 "Crime Data Summary: The Status of Crime and Fear in Boston"; "The 1999 Boston Police Safety Survey"; and "The 1999 Crime Summary Report," Boston Police Department.

Public Safety Indicators

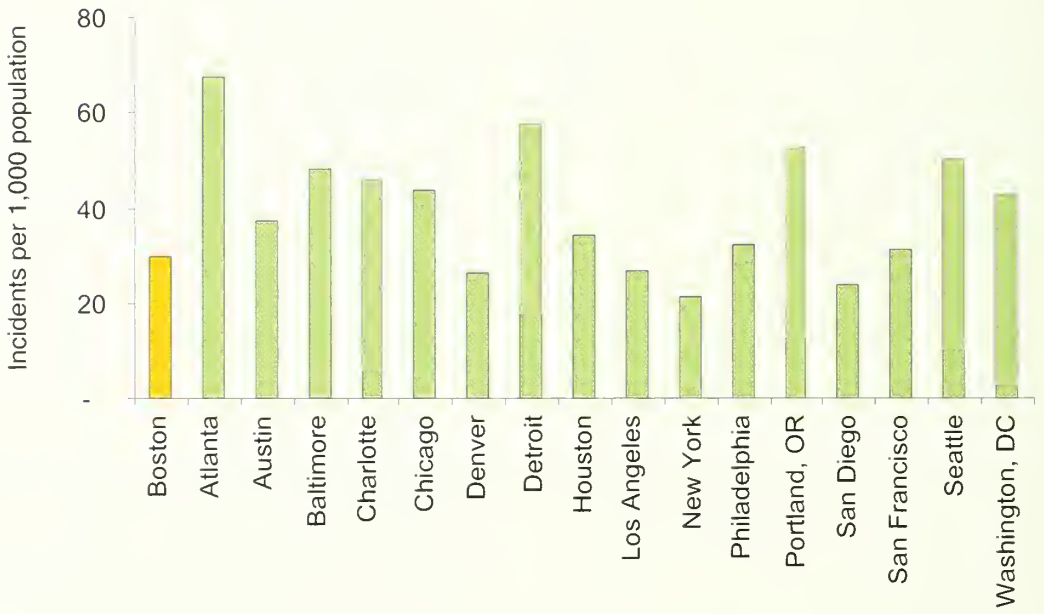
8.1 Low Crime Rates

The crime rate influences how safe people feel and whether or not they fear for their families and their personal and business property. Crime rates affect a community's economic health, its civic life, and its property values, as well as peoples' decisions about where to raise their families or educate their children. For a community to sustain low crime rates and ensure that its most vulnerable populations are protected, it is important to understand and track the relationship between criminal activity and the health of civic and social networks.

Trends in reported criminal activity in Boston vs. other major cities

BOSTON'S SAFETY RANKING HAS IMPROVED MARKEDLY COMPARED TO OTHER LARGE CITIES IN THE NATION, RISING FROM 28TH IN 1995 TO 12TH IN THE U.S. IN 1998; BOSTON WAS RANKED 17TH IN 1999.

Crime rate comparison, Boston vs. other large U.S. cities, 1998



Source: Boston Police Department

What does this mean?

Boston's safety ranking has improved markedly among the 50 other largest American other cities, rising from 28th in 1995 to 12th in 1998. Improvements were seen in the rankings of homicide rates (from 26th in 1995 to 6th in 1998) and property crime (from 27th in 1995 to 10th in 1998 for burglary, larceny, and vehicle theft). Boston's rankings for violent crime rates (such as rapes, robberies, and aggravated assault) also saw a marked change (from 35th in 1995 to 25th in 1998).

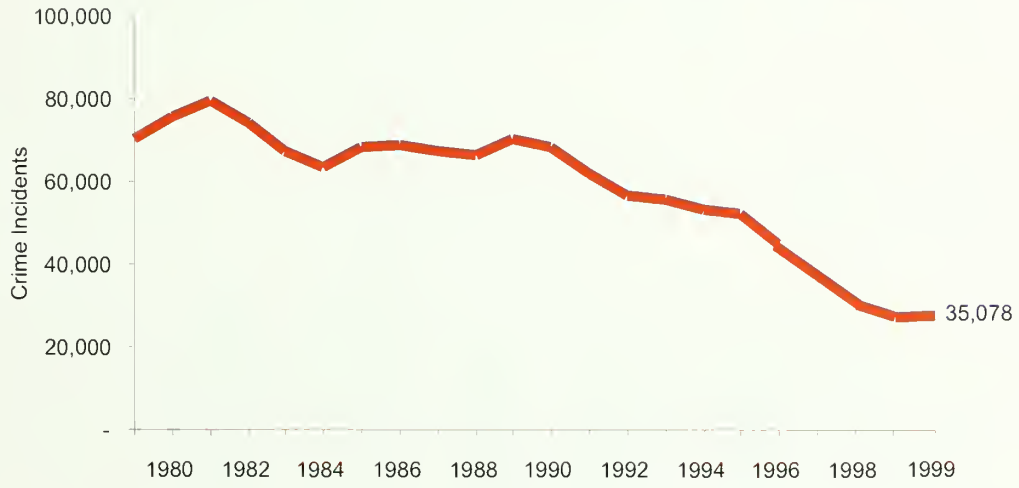
The national rate of decline in serious (Part One) crimes such as homicide, burglary, rape and vehicle theft was 20% between 1990 and 1999, while Boston's rate declined by 48%. This is compared to a decline in serious crime of 37% in the Northeast and a decline of 41% in Massachusetts over the same period.

Boston's citywide trends in reported criminal activity

OVERALL, CRIME RATES CONTINUED TO DROP FOR THE 9TH YEAR IN A ROW WITH A SLIGHT INCREASE (0.28%) IN SERIOUS CRIME BETWEEN 1998 AND 1999. YOUTH ARRESTS, HATE CRIMES, AND CRIMES IN HOUSING DEVELOPMENTS DECREASED BETWEEN 1995 AND 1999, WITH A 31% DECREASE IN VIOLENT CRIME AND A 47% DECREASE IN PROPERTY CRIME SINCE 1995.

HOWEVER, THERE IS CONCERN THAT RATES MAY BE RISING.

Citywide crime trends for Boston, 1980–1999



Source: Boston Police Department

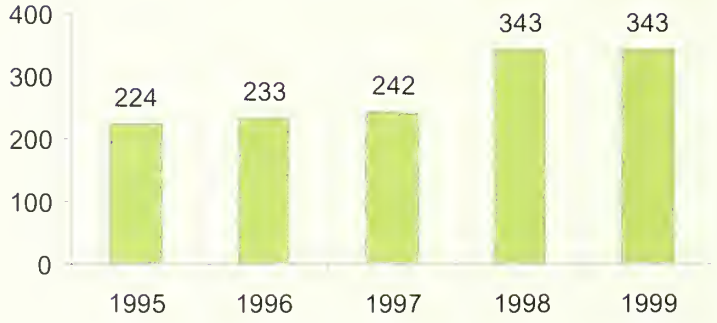
Youth (16 and under) arrests in Boston by year, 1993–1999

Source: Boston Police Department

Violent domestic crime (against persons) in Boston, 1993–1999

Source: Boston Police Department

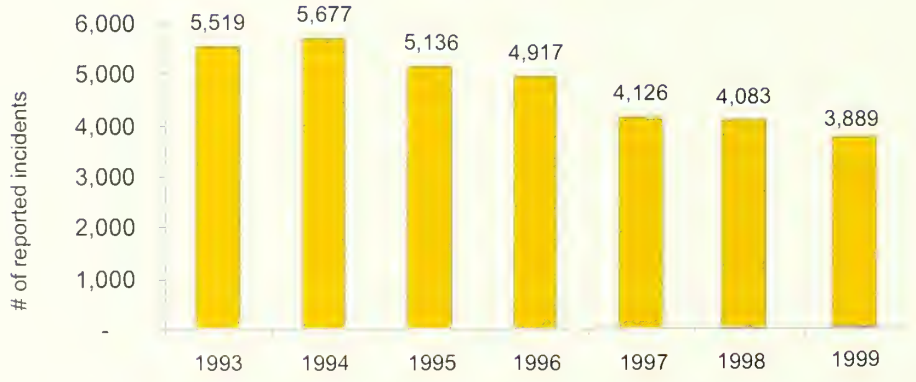
Reported incidents of hate crime in Boston, 1995–1999*



* 1998 Hate crime data is not available

Source: Boston Police Department

Reported incidents of housing development crime in Boston, 1993–1999



Source: Boston Police Department

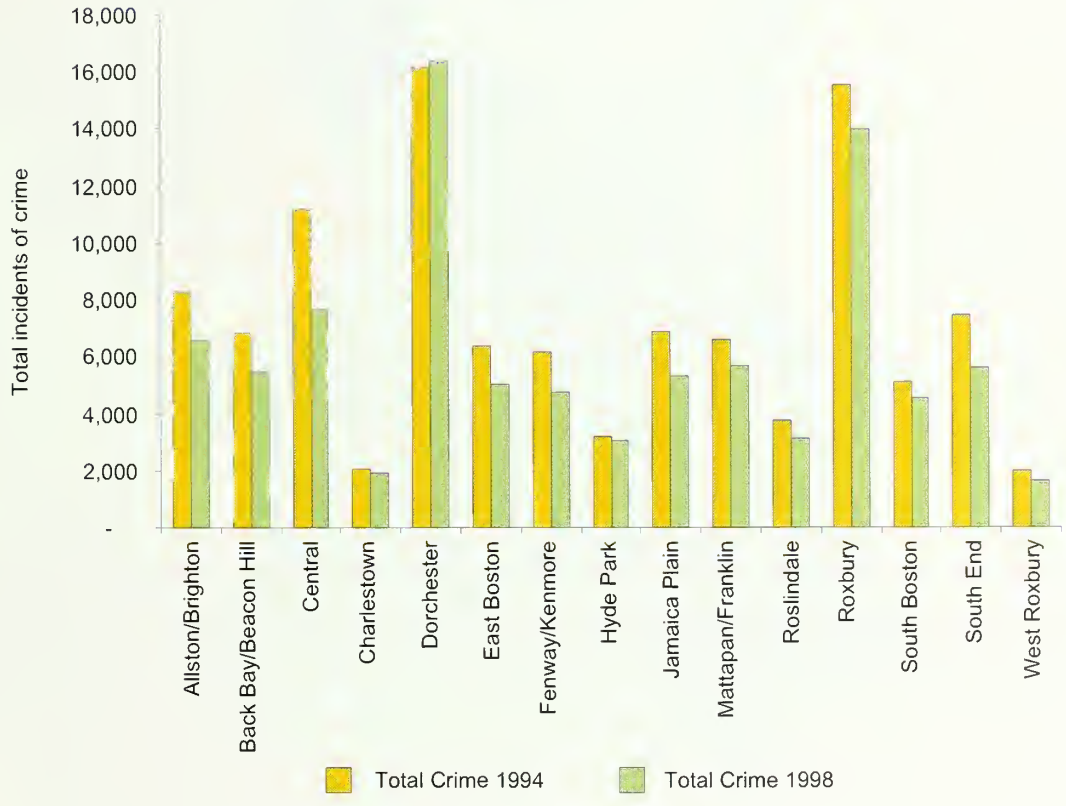
What does this mean?

Between 1995 and 1999, crime overall in Boston decreased significantly, a continuation of sharp declines between 1990 and 1995. Between 1998 and 1999, violent crime decreased by 13% and property crime decreased by 25%. Violent domestic crime, hate crimes, and reported incidents of crime in public housing developments also fell between 1998 and 1999. However, youth arrests, at 2,100, increased in 1999 by 6% over 1998 rates, a cause for concern.

Trends in reported criminal activity by neighborhood

VIOLENT AND PROPERTY CRIMES DECREASED OVERALL.

Total crime incidents by neighborhood, 1994 and 1998*



Source: Boston Police Department

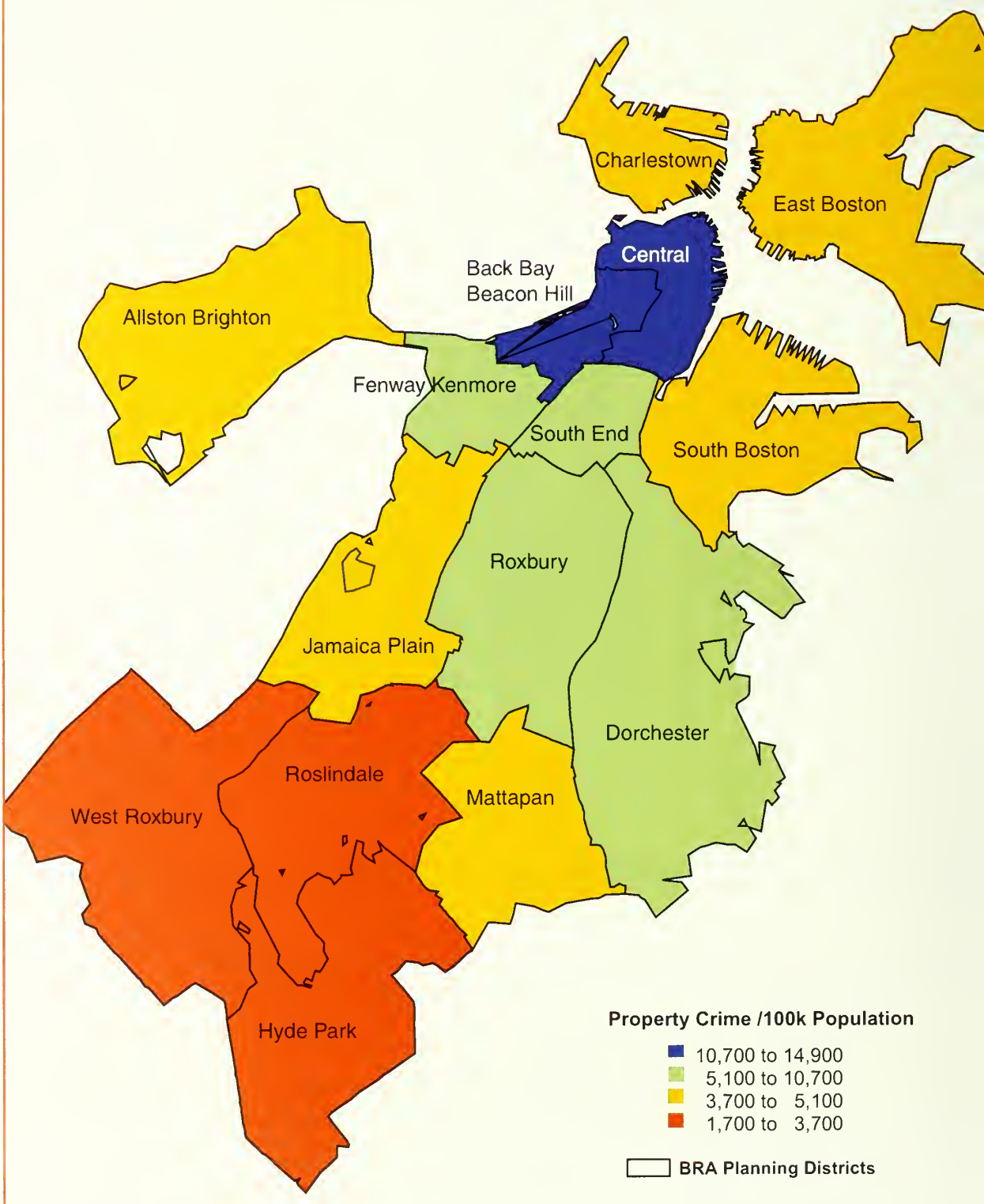
This chart does not account for the differences in neighborhood size and population.

What does this mean?

Between 1990 and 1999, serious crime in Boston neighborhoods dropped by 48% overall, with 32,988 fewer crime victimizations than in 1990. In a comparison of 1994 and 1998 rates, only Dorchester showed an increase, which was slight. Between 1998 and 1999, the Boston Police Department reported increases in East Boston, Jamaica Plain, South Boston, Hyde Park, Charlestown, West Roxbury, and Roslindale — a slight increase overall of 0.28% or 97 incidents, for Boston's second lowest total in more than three decades.

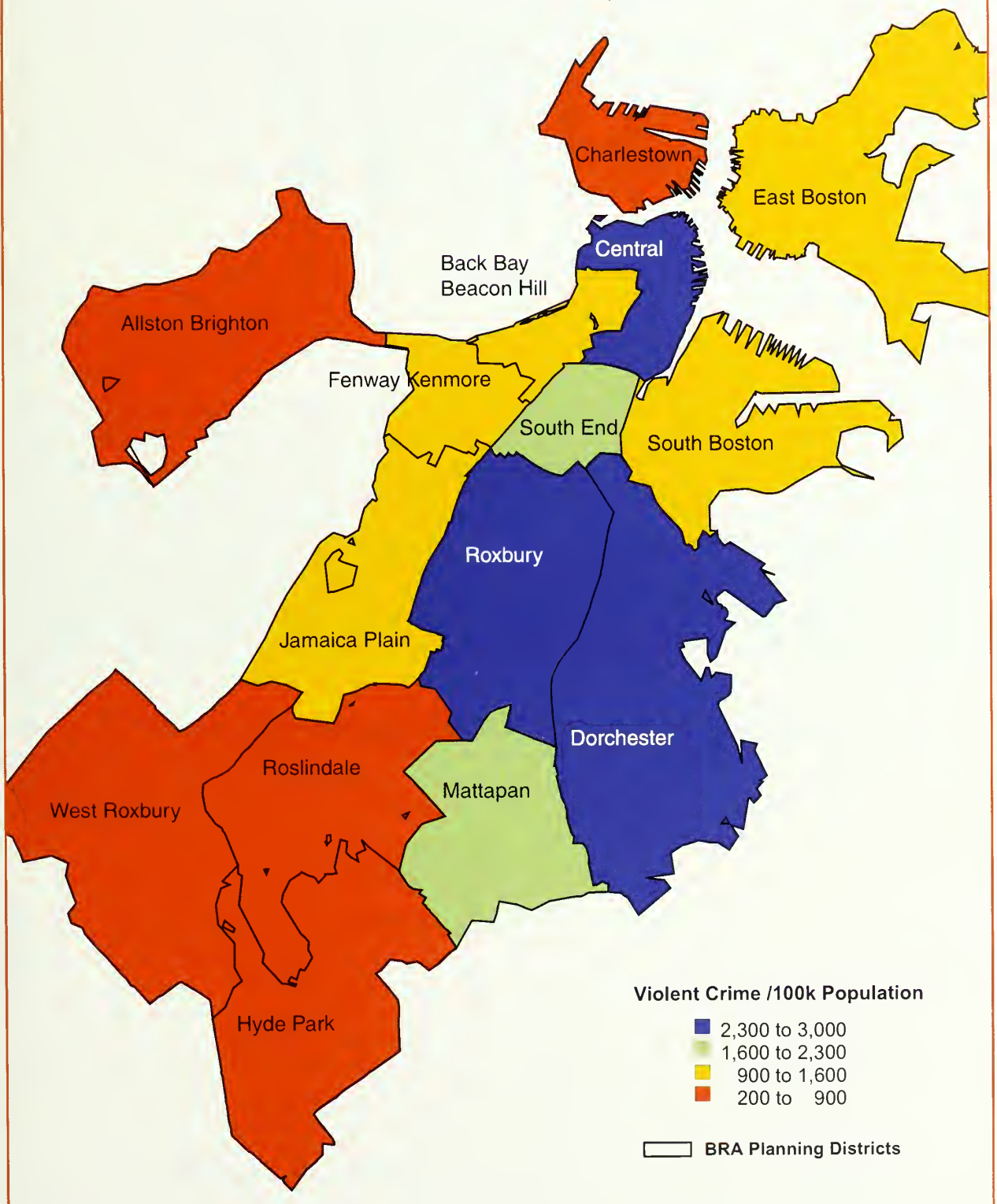
Property crimes were highest in the downtown neighborhoods, while violent crimes were highest in the neighborhoods of Central Boston, Roxbury, and Dorchester (see maps that follow).

Property crime in Boston, 1998



Prepared by:
Alan Saiz, Dept. of Information Services
Northeastern University

Violent crime in Boston, 1998



Prepared by:
Alan Saiz, Dept. of Information Services
Northeastern University

8.2 Perception of Public Safety

The perception of crime in a community is often caused by symbols of neglect, such as graffiti and the lack of cleanliness and repair of public and private property. A well-maintained neighborhood sends the message that residents care about their neighborhood and are therefore less likely to tolerate criminal or mischievous behavior. A "climate" that nurtures criminal behavior can affect issues ranging from public safety, economic investment, and property values to civic activity. Political and social scientist, James Q. Wilson developed a theory to explain this phenomenon, which he called "broken windows." The broken windows theory states that "unless kept in check, public disorder leads to even greater disorder."

Cleanliness and repair of the public realm

See Environment section.

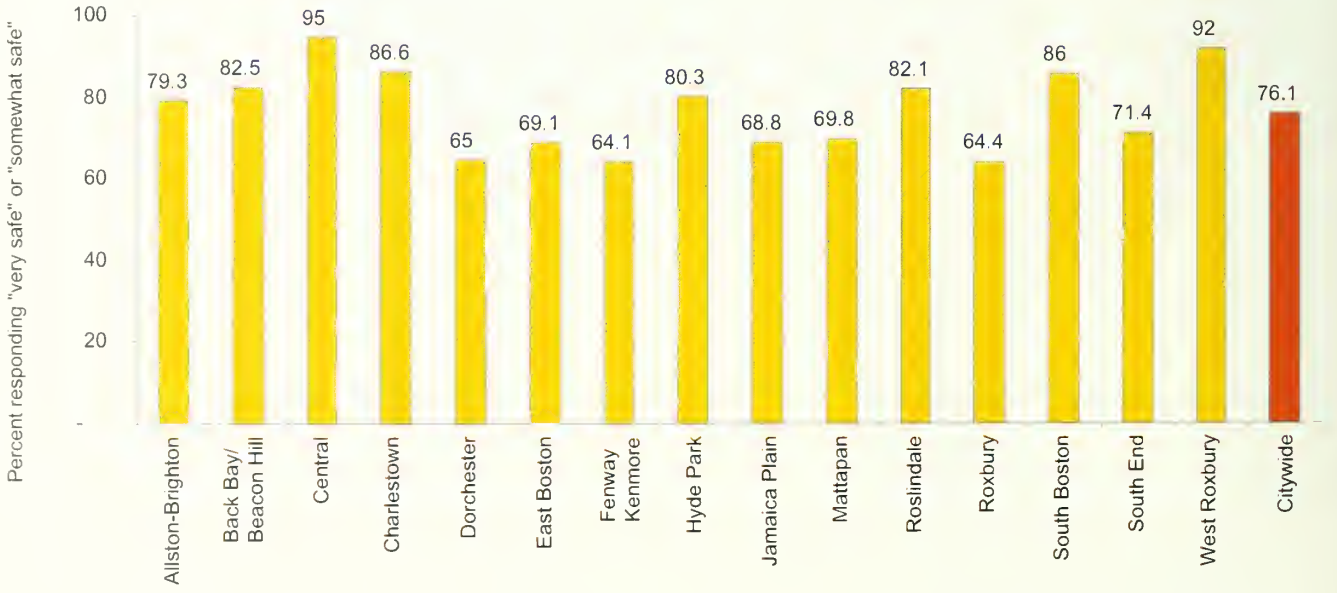
What does this mean?

City maintenance is related to the perception and the reality of crime and public safety in a community. High maintenance standards enhance civic confidence while ensuring safe access to basic services for city residents. This measure indicates clear communication and cooperation among city agencies and community groups, which is necessary to maintain a clean and safe public realm.

Public perception of safety

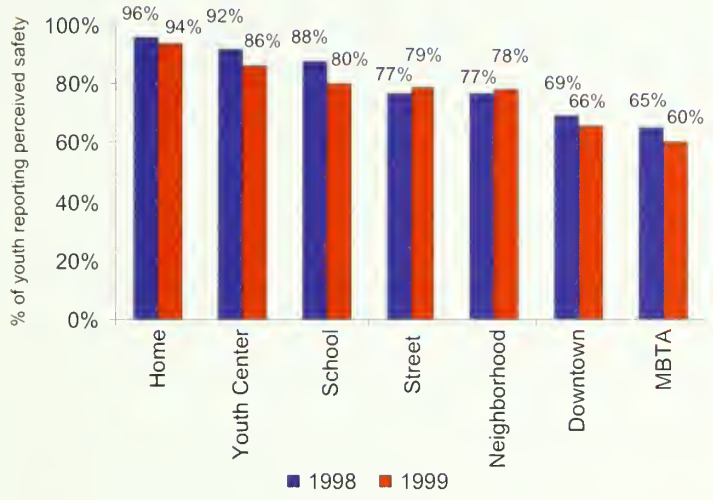
IN 1998, OVER 76% OF RESPONDENTS FROM ALL NEIGHBORHOODS FELT SAFE TO WALK ALONE AT NIGHT IN THEIR NEIGHBORHOOD. BY 1999 THE PERCENTAGE HAD INCREASED TO 78%. HOWEVER, DISPARITIES IN RESIDENTS' EXPERIENCES WERE SIGNIFICANT.

Citizen perception of safety by neighborhood, 1999



Source: Boston Police Department , Public Safety Citizen Survey

Youth perception of public safety, 1998–1999



Source: Boston Youth Survey, Office of Community Partnerships

What does this mean?

Perception of crime, whether true or not, can create fear and inhibit private-sector investment, neighborhood socializing, and civic efficacy. The perception of safety contributes to a healthy and vibrant quality of neighborhood life. Due to community policing strategies such as citizen involvement and neighborhood-based police officers, residents are now feeling much safer in their own communities. In the Boston Police Department's 1998 Citizen Survey over 50% of respondents from all neighborhoods felt that crime had decreased across the city, and by 1999, 78 % of Boston residents felt safe out alone in their neighborhoods at night.

However, the Annual Youth Survey, conducted by the Boston Health and Human Services Cabinet's Office of Community Partnerships, showed a decrease in the perception of safety between 1998 and 1999 at home, in school, in youth centers, in downtown and on the MBTA among youth. The youth surveyed reported a marginal increase in the sense of safety on streets and in their neighborhoods.

8.3 Strong Civic and Social Networks

Strong civic and social networks are the best deterrent to crime. They enable a community to provide support and early intervention to prevent activities that can lead to risky, violent, or criminal behavior. This is especially true in the cases of the youth crime, hate crimes, and domestic violence, which can hamper the well-being and productivity of individuals and affect them for a life-time. Population projections show that Boston's youth population is expected to rise in the next decade. Strong and stable families, healthy behaviors, and opportunities for productive engagement such as jobs and extra-curricular activities can protect young people from engaging in criminal behavior.

Percent of residents who trust their neighbors

IN 1999, OVER 80% OF BOSTON'S RESIDENTS SURVEYED TRUSTED THEIR NEIGHBORS

See Civic Health section.

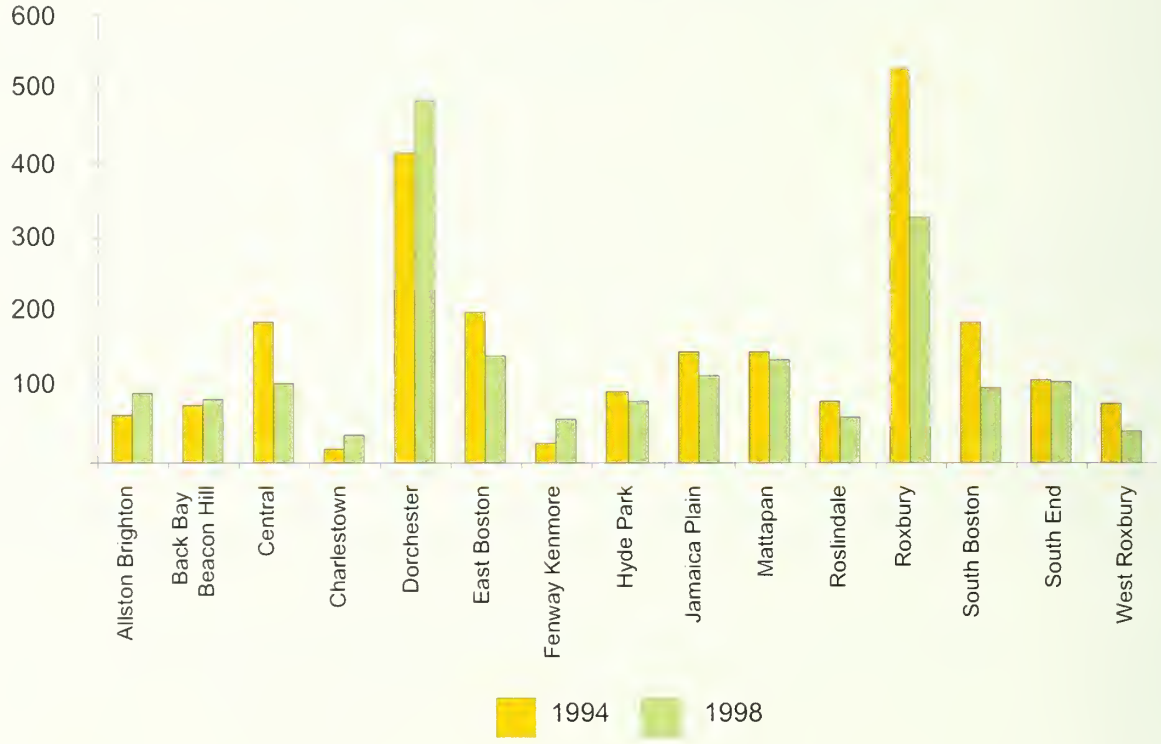
Juvenile population vs. juvenile arrest rates by neighborhood

(Note: Over time, this measure will change to track juvenile crime instead of juvenile arrests)

ARRESTS FOR JUVENILES (AGES 16 AND UNDER) SHOWED A DECREASE OF 16% FROM 1994 TO 1998, AND A 6% INCREASE BETWEEN 1998 AND 1999, A CAUSE FOR CONCERN, AS BOSTON'S ADOLESCENT POPULATION IS PROJECTED TO INCREASE THROUGH 2005.

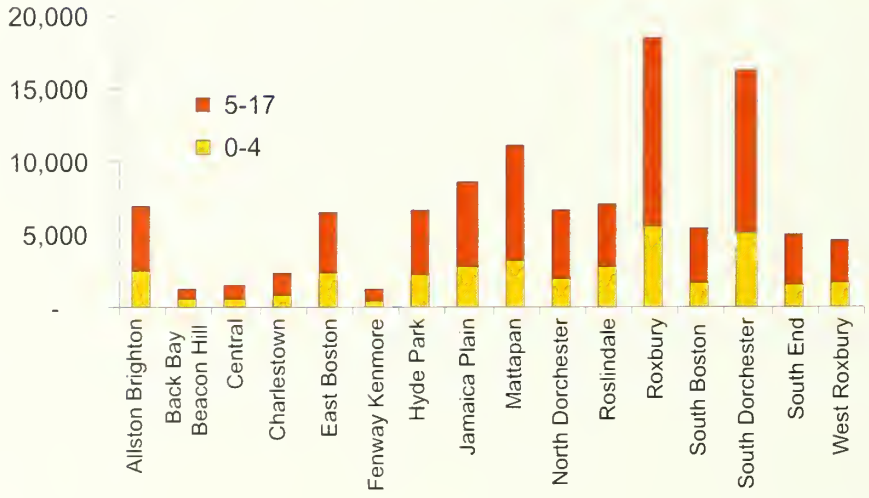
See Education section for increase in after-school activities.

Juvenile arrests by neighborhood, 1994 and 1998



Source: Boston Police Department

Boston's youth population by neighborhood, 1990



Source: Boston Redevelopment Authority, U.S.Census, 1990

What does this mean?

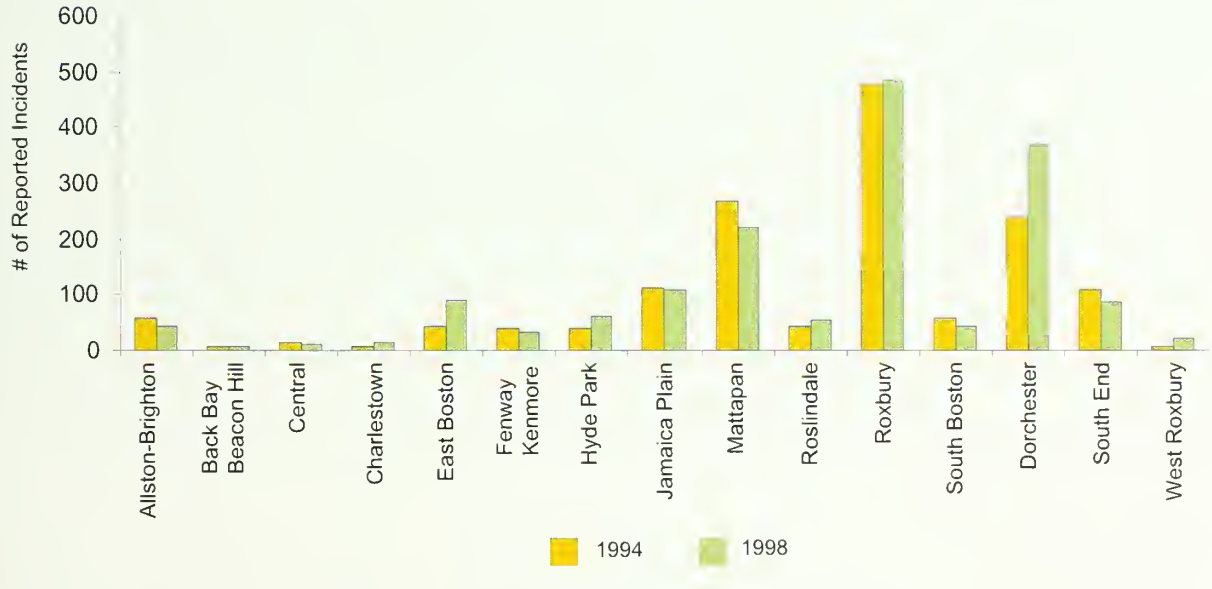
Between 1994 and 1998, reductions in youth arrests occurred in the areas of drug violations (43% decrease), robbery (36% decrease), and simple assault (26% decrease), while notable increases occurred in the areas of vehicle theft (141%) and aggravated assault (44%).

Boston's youth population is projected to peak in the year 2005, which requires intervention *now* in order to prevent crime in the future. Also, Boston Police Department data indicate that 33% of all juvenile crime in Boston occurs between the hours of 2:00 and 6:00 p.m., when young people are free and unsupervised. Alternative activities and social work directed toward this high-risk population may help deter crime. Boston has responded with highly effective partnership initiatives made up of church groups, federal, state and city law enforcement agencies and universities. Initiatives such as Boston's 2:00–6:00 Initiative — broad efforts to increase educational and life enrichment activities for children and youth in out-of-school time — seek to decrease youth homicide rates and gang activity by providing challenging, enriching alternatives for young people.

Violent domestic crime by neighborhood

SEVEN OF BOSTON'S NEIGHBORHOODS SAW AN INCREASE IN DOMESTIC VIOLENCE FROM 1994 TO 1998. CITYWIDE RATES DECREASED BETWEEN 1997 AND 1998.

Reported violent domestic incidents by neighborhood, 1994 and 1998



Source: Boston Police Department

What does this mean?

Domestic violence is evidence of social and familial isolation and breakdown whereas strong social networks can offer support and protection to vulnerable populations. Domestic violence — which includes both spousal and child abuse — decreased in Boston between 1997 and 1998, which continued into 1999 for a 10% decrease from 1998 figures, after being on an upward trend since 1993. However, the neighborhoods of East Boston, Hyde Park, Roslindale, Dorchester and West Roxbury all saw an increase in incidents of domestic violence during this period.

8.4 Private-Sector Investment in Neighborhoods

Private-sector investment brings jobs, increases commerce and adds bustle to a neighborhood which are all are deterrents to crime. A prominent economic theory of criminology suggests that in times of low unemployment, rates of street crime decrease while workplace crime increases. While the Boston Police Department does not have statistics to support or refute such a theory, it is important to explore linkages between economic conditions and crime rates.

Public safety impact on business investment by neighborhood

SINGLE-YEAR DATA AVAILABLE DOES NOT INDICATE CORRELATION BETWEEN CRIME RATES AND INVESTMENT.

THE STUDY OF DATA OVER TIME WILL HELP TO PROVE OR DISPROVE THIS CORRELATION.

What does this mean?

Private investment as measured by commercial vacancy rates or new business activity is an indication of investors' confidence that among other things, their investment is not at risk due to criminal activity and that the safety of their employees and customers is not likely to be in jeopardy. To understand this issue, data on private investment from the Boston Main Streets program was studied in relation to public safety data from the Boston Police Department. Though investment in neighborhoods had increased and crime had decreased, the one-year data studied did not point to any links. We will continue to study trends over time to understand this issue.

8.5 Resident Satisfaction with Quality of Life

A primary indicator of whether a community is a safe place is the way residents feel about their neighborhood, city services, and their own quality of life.

The Boston Police Department's annual Public Safety Survey is the best source of consistent qualitative data about the quality of life in Boston and residents' concerns and priorities. The 1999 survey included interviews with more than 2,000 adult Bostonians proportionately represented across the city's neighborhoods and racial/ethnic groups.

Quality of life ranking by Boston neighborhood

RESIDENTS RANKED THEIR NEIGHBORHOOD QUALITY OF LIFE FROM A HIGH OF 8.1 IN WEST ROXBURY TO A LOW OF 6.4 IN ROXBURY. (SCALE 10 TO 1, WITH 10=HIGHEST).

Source: Boston Police Department, Public Safety Citizen Survey

What does this mean?

On a scale of 1 – 10, 10 being excellent, neighborhood residents ranked their quality of life from a high of 8.1 in West Roxbury to a low of 6.4 in Roxbury. Only East Boston and Roxbury were ranked below 7 by their residents. Within neighborhoods, however, there were important disparities. Home-

owners, older residents (35+), and whites reported a higher quality of life than other age or racial/ethnic groups. Residents' quality of life also increased with income.

During the five-year course of the Boston Public Safety Surveys, the proportion of Boston's adult residents who feel safe walking home alone at night increased from 55% to 78%, up by by 23%.

Respect and trust between residents and Boston police officers

MOST RESIDENTS HAVE CONFIDENCE IN THE ABILITY OF POLICE OFFICERS TO PREVENT CRIMES (84%) AND SOLVE CRIMES (85%). ABOUT 12% REPORTED HAVING A NEGATIVE EXPERIENCE WITH AN ON-DUTY POLICE OFFICER.

Source: Boston Police Department, Public Safety Citizen Survey

What does this mean?

Approximately 52% of adult residents see a police officer in their neighborhood on a regular basis, and approximately 43% know some of the police officers by name. Most residents have confidence in the ability of Boston's police officers to prevent (84%) and solve crimes (85%). Approximately one-third of the population has a "great deal" of confidence on the police, and three-quarters rank emergency response by police as good or excellent. About 12% reported having a negative experience with on-duty police officers in the previous year.

Boston's community policing strategy has proved to be highly effective. It focuses on understanding resident issues in their entirety and places emphasis on crime prevention through involving citizens in both understanding problems in their neighborhoods and the city, as well as finding solutions for them. These efforts have resulted in mutual respect and confidence in the Police Department's effectiveness and both an increase in crime reporting and a decrease in crime rates. Police Officers now become more engaged in the community they serve by gaining the respect of the community, becoming known by the residents, merchants and youth, and by sponsoring and assisting in community events and activities. Familiarity with the local beat cop enables residents to feel more comfortable reporting crimes and going to the police for help. This is particularly important in minority and new immigrant neighborhoods where, historically, there have been feelings of mistrust between the citizenry and the police force. Also, deep knowledge of the local community in which they serve allows police officers to intervene early and discourage criminal activity.

SECTION NINE

Technology

Vision

A community where information technology enhances the lives of residents, who use it to build community, to prepare for good 21st century jobs, and to make informed personal and political choices.

Indicators of Technology Parity	Measures	How Is Boston Doing?
Access to Technology	■ Percentage of households with computer ownership and Internet access: national, rural, inner city average vs. Boston rates.	■ National survey shows a "digital-divide" among rural and inner city residents compared to others
	■ Percent and type of Metro-Boston and Boston households with home computers and Internet access	■ Computer and Internet access vary from 37% and 20% for Boston; 48.5% and 30% for Metro-Boston; 51% and 32% for Metro-Ring area
	■ Percentage of households with computer ownership in Boston, by education level	■ Survey indicates that 27% of Boston residents with less than high school and 60 % with 4+ years of college own computers
	■ Percent of Boston residents reporting computer ownership and Internet access by race and income	■ Computer and Internet access vary widely across race. Survey indicates 54% and 32% each for whites, compared to 23.5% and 5.2% for blacks
	■ Percent of households with high speed Internet access	■ 80% of households in Boston can access high speed DSL services
	■ Percent of youth reporting Internet use	■ Youth surveyed report 86% have access to the Internet in school and 58% have access at home
Use of Technology for Economic Development and Commerce	■ Number of DotCom domain names per 1,000 firms in Metro-Boston	■ Greater Boston has 652.7 DotComs per 1,000 firms, 10th in the nation
	■ Number of graduates from computer-based workforce training programs	■ Data not available at this time
	■ Number of unfilled technology jobs in Massachusetts	■ In 2000, 8% of high tech jobs went unfilled over a two-month period
Use of Technology for Community Building	■ Number of inter-active neighborhood computer networks and web sites	■ Data not available at this time
Use of Technology for Teaching and Learning	■ Number of students per computer in the Boston Public Schools	■ Boston has one multi-media computer for every 7 students, up from one per 63 students in 1997
	■ Percent of Boston Public Schools wired for the Internet	■ 100% of the Boston Public Schools are wired for the Internet
	■ Number of teachers using technology as a teaching tool	■ 60% of Boston Public School teachers use computers for classroom learning
Access to Local Media	■ Number of neighborhood newspapers and non-English speaking radio stations and newspapers	■ 11 Boston neighborhoods have their own newspaper. Boston has 3 radio stations and 9 newspapers serving non-English speaking populations
	■ Hours of local programming by local TV stations	■ Data not available at this time

Technology

Historical context

In about five years, the World Wide Web has — for many but not all of us — changed the way we live, work, do business, and think about the future. It has also created vast new forms of privilege and disadvantage. Many experts believe that the choices we make within the next five to ten years with regard to technology access will either level the playing field for historically disenfranchised groups or, conversely, lock in disadvantage for generations.

Families in affluent areas are eagerly acquiring business and home computers and linking up to the Internet. Low-income families are much less likely to have a home computer or to have the electronic infrastructure in their community to allow for easy and rapid connections. Patterns of technology access are already reinforcing historic patterns of unequal opportunity.

According to the U.S. Department of Commerce, 60% of all jobs now require technological skills. The U.S. Office of Management and Budget estimates that 75% of all transactions between individuals and the government— including such services as delivery of food stamps, Social Security benefits, and Medicaid information — will soon take place electronically. Increasingly, vital information such as requests for proposals for work contracted out by the Commonwealth of Massachusetts is available only on the Web.

Results from a survey by the Department of Commerce indicate that the "digital divide" in the nation actually is deepening. Between 1997 and 1998, the gap in Internet access between those at the highest and lowest income levels grew by almost 30%. In 1998, more than 40% of all American households owned computers and 25% had Internet access. However, while 80% of American families earning $100,000 or more per year had computers in their homes, only 25% of families making less than $30,000 did. Households with incomes of $75,000 and higher were more than 20 times more likely to have access to the Internet than those at the lowest income levels, and nine times more likely to have a computer at home.

Nationally, in 1998, black and Latino households were approximately one-third as likely to have home Internet access as households of Asian/Pacific Islander descent, (the racial/ethnic group most likely to be connected to the Internet nationally, but not in Boston), and about two-fifths as likely as white households. At the highest income levels, however, these racial gaps almost disappear.

Many of the nation's lowest income households, lack even the most basic technology. While all but 6% of American households had a telephone in 1998, 44% of families receiving public assistance and 50% of female-headed households lacked even this basic level of technology.

Regional context

Greater Boston is one of the nation's — and the world's — hottest high technology centers, competing with Silicon Valley, Seattle and cities in the Midwest, New York, New Jersey, Colorado and Texas for venture capital and skilled workers. According to a recent report by the American Electronics Association cited in the Boston Globe, 216,700 high tech workers were employed in Massachusetts in 1998, 25,000 more than in 1993. These workers earned an average of $64,400, a wage 70% higher than average wages in the private sector.

The role of high tech companies has changed since the 1970s and 1980s, when high technology meant the largely the minicomputer industry. Today, high technology companies also encompass software development, telecommunications, media and graphics, production and biotechnology — much of it fueled by start-ups connected to graduates of the area's many colleges and universities.

Despite the increasing importance of technology sectors to the regional economy, however, Massachusetts is falling behind other states in home computer access. According to a 1998 U.S. Department of Commerce report, "Falling Through the Net," Massachusetts ranked 21st among all states in home computers and fifth

among the six New England states, with only Rhode Island ranking lower.

While new technologies are making it easier for small businesses to compete in the marketplace, they are also making it easier for companies and workers to locate far from the urban core, making job commutes for some entry-level workers nearly impossible. New technologies are also leading to highly automated manufacturing processes which, while increasing productivity, require fewer low-skilled workers. The federal Office of Technology Assessment calls this "the concentration of poverty and the de-concentration of opportunity."

These trends are accelerating the impact of the "digital divide," with high-skilled workers in short supply and low-skilled workers bearing the brunt of the rising cost of living in Metro-Boston, with insufficient opportunities for educational advancement.

Researchers at the U.S. Bureau of Labor Statistics estimate that employment in information technologies will double by 2008, but the Massachusetts Technology Collaborative's "innovation economy indicators" show that the number of engineering and science degrees granted by Massachusetts' colleges and universities actually declined between 1997 and 1998. Their survey data show vacancy rates of 8% -10% in the scientific, engineering and information sectors, and researchers from the 21st Century Workforce Commission project a shortage of almost 400,000 workers with a bachelor's degree in Massachusetts by 2010. The shortage of skilled workers in technical fields is already threatening to slow the region's economic growth, yet there is no comprehensive state strategy for training less skilled workers for good jobs in the technology sectors.

Citywide context

The Information Revolution has reinforced Boston's role as a hub of commerce, this time as a hub of dense high-speed networks and high-skilled workers. Bostonians' access to computers has increased dramatically within schools, libraries, community centers, businesses, organizations and homes throughout the city, but many residents still face a deep "digital divide."

Prior to Mayor Menino's 1996 State of the City address, in which he made a commitment to increase access to educational technology in Boston, the ratio of students to computers in the Boston Public Schools was 63:1. By June of 1998, that ratio had been reduced to 10:1. Today, it is 7:1, and more than 60% of all classrooms in the Boston Public Schools are connected to the Internet. The Mayor's goal for the "Kids Compute 2001" initiative is to provide one computer for every four students, and a computer for every teacher, and to have every classroom in the Boston Public Schools networked with high-speed Internet access by the year 2001.

In October of 1998, as a result of the city government's commitment to this issue, Boston became the first major urban school district in the nation to network every school and to provide high-speed Internet access — the result of a remarkable collaboration between the City of Boston, the federal government, the private sector and the International Brotherhood of Electrical Workers, which wired the schools pro bono. The complete electrical and technology build-out planned for Boston will bring networks into every classroom and into over half of the city's community centers by 2001. Business partners have contributed more than $20 million of goods and services. Mayor Menino committed $50 million in capital money for networks and computers, and another $10 million has been raised through foundations and government grants. Boston is also taking extensive advantage of the 'E-Rate' with a federal subsidy of $65 million for Internet access to schools, libraries, and other publicly accessible facilities.

Over 3,800 (80%) of all Boston Public School teachers have now received training in how to use and integrate computers into the school curriculum. Many librarians and community center and community organization personnel have received the same or similar training. A new initiative called TechBoston is training Boston public school students how to repair and maintain computers and networks. These

students will provide technical support within the school system and the community while they learn marketable technology skills. More than 1,500 Boston high school students are now taking courses in Web design, networking, desktop operation, robotics or network design, and many are entering high-paying jobs after graduation.

In 1998, Cablevision, a large national cable provider, signed a contract to provide a fiber-rich wide area network to the city and its residents and businesses. This network will provide high-speed video, data and telephone services throughout the city through a three-year build-out. Cablevision will also donate a free data connection to every municipal building in the city. RCN, a regional telecommunications firm, has negotiated a long-term contract to provide similar services to the city, proposing a "fiber-to-the-curb" network in the downtown and in residential neighborhoods and is contributing two strands of fiber optic cable to every municipal building at no cost to the city. In March 2000, the City also signed a contract with Metricom to build a wireless system of Internet connections.

Within the next few years, every Boston resident and business will have a choice of at least two video providers and three (including Verizon) data and telephone providers. The level of speed and competition in data, video, and telephone will provide unparalleled infrastructure to Boston. Cell phones and hand-held computers are also broadening the reach and use of the new technology. However, these are commercial services and products available only to those who can afford them.

Much as the rivers and railroads helped develop urban America in the 18th and 19th centuries, this telecommunications infrastructure will both draw a vibrant mix of businesses, jobs, culture, and education to Boston and support the advancement of Boston residents well into the new millennium. Some Boston neighborhoods, such as those downtown and in Allston/Brighton, are already benefiting from (or being impacted by) their close proximity to the high-speed fiber-optic cable running next to the Massachusetts Turnpike, attracting high technology companies and workers to new and renovated buildings.

The importance of technological innovation in Boston has been captured in a new tour, the Innovation Trail, now offered by the Boston History Collaborative.

Neighborhood context

Many community-based groups are tackling issues of resident and organizational access and capacity building in the Information Age. One such program, the Technology Center at Tent City in the South End, provides residents with computer access and training in computer repair as well as programming and technical support, in part to create a cadre of technically skilled residents who can support organizations and families as they invest in computer technology. The Technology Center is currently training residents in A+ Certification skills. Graduates not only provide Boston's community-based non-profits with technical backup but possess highly competitive skills in today's job market.

Groups such as YouthBuild Boston and ABCD's Dorchester Neighborhood Service Center are working to increase the number of computers available to their constituents. YouthBuild Boston, for example, is training residents in the use of computers and selling refurbished computers (less than $250 for IBM-compatible desktop Pentium computers). Associated Day Care of Greater Boston is working to address the need for computers in child care centers, and coordinates the Windows to the World Program, providing computers and training to child care providers. HiQ Computer CEO Echo Tsai, donated 1,000 new Internet-ready computers to low-income families in Boston. The company has several facilities across the country, including a 30,000 square foot facility in Boston's Empowerment Zone. The computers are distributed through community organizations participating in the City's Technology Goes Home Program. The program identifies eligible families and provides 12 weeks of training and technical support. This and other efforts are supported by the new Digital Bridge Foundation

founded by five CEO's from Boston. Additionally, the U.S. Department of Housing and Urban Development (HUD) is working to increase computer access in public housing developments.

The Information Age is also creating new possibilities for partnership and communication. A 1997 Commerce Department TIIAP grant enabled six Boston public high schools in collaboration with five community-based organizations and business partners to use an innovative Boston-based project called Linking Up Villages (LUV), developed by a computer scientist in Dorchester, to reinvigorate communities through local electronic bulletin boards and software.

Eight new computer labs have opened in the City's Community Centers and more are being planned with support from the Microsoft "Libraries on Line" fund. All central Boston Public Library branches have at least six networked computers, and 26, including the central library in copley Square, have six or more computers available to the public. In addition to access through public schools, libraries and Community Centers, Boston neighborhoods also contain more than 80 community technology centers providing both some public access and facilities for adult basic education or job training programs. Community-based computing centers are providing services that range from after-school programs for youth to training programs for seniors, organization's staff, and veterans.

Located throughout the city and connected to the national computer technology centers network CTCNet, these centers are densest in Roxbury due to the Timothy Smith Fund, administered by the City of Boston's Trust Department. Named after a former Roxbury resident who bequeathed funds for the residents of Old Roxbury, this fund has made possible the opening of 40 community technology centers with state-of-the art equipment and furnishings by the end of 2000. A number of established institutions and organizations such as the Urban League of Massachusetts, United South End Settlements, the Roxbury Multi-Service Center, and Boston Neighborhood Network-TV are coordinating new or expanded technology centered programs; other centers are located in housing developments and smaller organizations. However, these centers sometimes lack adequate funds for full time staffing and technical support. The Timothy Smith Fund centers will be updated through 2019. Other neighborhood-based technology centers, one opened in 2000 by the Codman Square Health Center, are also providing Internet access, skills development, and job training to residents.

However, even with resources such as the City of Boston's web site, several neighborhood-focused web sites and commercial sites focused on Boston, there is relatively little on-line content for neighborhood residents, which impedes progress in encouraging their use of computers and the Internet. The City of Boston has begun to provide on-line access to city services through kiosks located throughout the neighborhoods. In addition, Boston's Empowerment Zone is gearing up for EZ Info, a comprehensive neighborhood information system being designed by Inner City Software, a local web site development company, to provide resource information to residents in a timely, accessible manner on-line. Because of language and literacy barriers, neighborhood intrancts which do not require literacy are also being proposed.

In addition to computer technology, Boston residents enjoy access to their own cable station through Boston Neighborhood Network (BNN-TV), where they can learn to produce their own programs as well as participate in two-way communication and learning on the station's Answer Channel. The Boston Neighborhood Network News also provides timely and comprehensive coverage of Boston and its neighborhoods, as do Boston's large number of neighborhood-based and linguistically focused newspapers and radio stations.

However, despite the wealth of technological resources in Boston, too many neighborhoods and families are lagging behind in their access to and use of technology, and some schools are just beginning the process of getting students linked to the Internet or incorporating technology as a tool in the curriculum. Many community-based

organizations are also struggling to catch up with technology, often without sufficient resources or technical support.

Remaining Challenges

- **Given the importance of the technology sector to the region's economy, the need for technologically proficient workers in all sectors, and the current shortage of high-skilled workers, Massachusetts needs a comprehensive, funded strategy to create ladders of training and opportunity in technology-related fields.**

- **To fulfill their potential, community technology centers need secure sources of staffing and technical support.** Although Boston has the highest number of community technology centers compared to other cities of similar size, there remains in many a considerable lack of up-to-date hardware, software, and, especially, staff and technical support.

- **In a 1996 survey, only 10% of Boston Public School students had computers in their homes**. While this is now changing, if Boston is to level the playing field in terms of racial disparities in educational achievement rates — a primary goal of the Boston School Department and School Committee — we must all begin to address the disparity in technology access in the home. The new information superhighway that is being built in Boston is a toll road inaccessible to many of the city's low-income residents due to its cost. The majority of low-income families do not have home computers, and those who do are less likely to have access to the Internet.

- **Many Boston families do not understand the ways in which technology can be useful to their children or to their small businesses. Public education is needed to inform Bostonians about the importance of new technologies for success in the new economy.** Even as technology access becomes more universal overall, its use remains segmented — exacerbating the situation for those already burdened by economic disadvantage. As technology becomes more of a driving force throughout every sector of the economy, not having access to e-mail and the Internet will drive an even bigger wedge between the low-income families and the rest of society.

- **The non-profit sector lags far behind the for-profit sector in obtaining high-quality hardware, Internet access and training.** While new technologies could produce both cost savings and upgrades in management and services, community-based organizations lack the time, money and expertise to invest in these improvements.

- **Lack of information and effective communication among residents, organizations, media and government often hampers collaboration and effective civic action.** With major television channels mostly highlighting the negative aspects of Boston's communities and neighborhoods, residents are often unable to obtain the information they need or desire. This is exacerbated by the fact that many community-based organizations and public agencies do not yet regularly communicate with residents. New telecommunications technology offers great promise in reinvigorating civic dialogue and participation, if equitably distributed.

- **Inner city residents are still the least well connected to the Internet, but one promising sign is the apparent ease with which young people are learning the most advanced technology and guiding us toward solutions to these challenges.** As we now know, if you have a problem with a computer, ask a young person for help.

Technology Indicators

9.1 Access to Technology

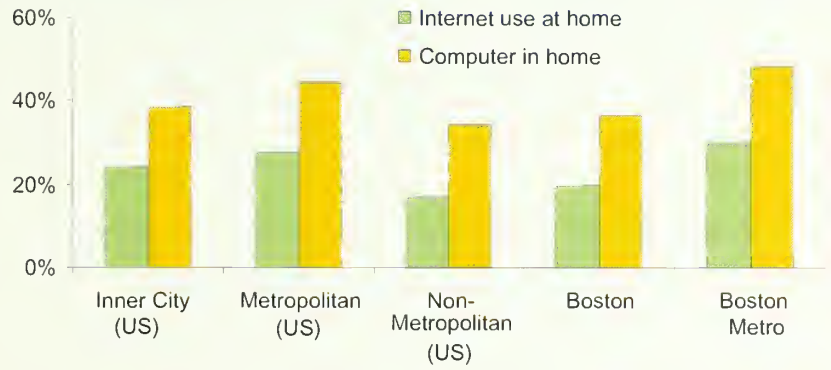
The impact of information technology on society is seen as similar, if not greater, in scale and scope than that of the Industrial Revolution. The development of technology has fundamentally altered the way many people live, work, communicate, conduct business, and entertain themselves. The importance of learning how to access and use information technology is already becoming clear. From day-to-day personal conveniences (such as ordering groceries, booking airline tickets, getting bus schedules and checking movie times), to conducting business such as behind-the-counter inventory checking, professional, technical, and government services, personal banking, and research), technology has revolutionized the way we manage our lives. Today, employment and educational opportunities and knowledge about a wide range of topics are all to be found on the World Wide Web. In the near future, nearly every job will require some sort of knowledge of computers and their operation.

While access to technology is opening up a world of options for many, others are getting left further and further behind. The U.S. Department of Commerce's 1998 Current Population Survey shows a serious "digital divide," with racial, income and educational attainment disparities in computer use and access.

Percent of households with computer ownership and Internet access

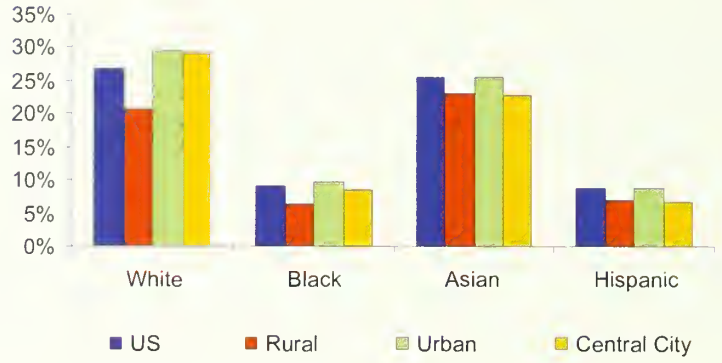
NATIONAL SURVEY INDICATES A "DIGITAL-DIVIDE" AMONG RACES, INCOME GROUPS, AND AT EDUCATION-ATTAINMENT LEVELS .

Computer ownership and Internet access: national averages vs. Boston, 1998



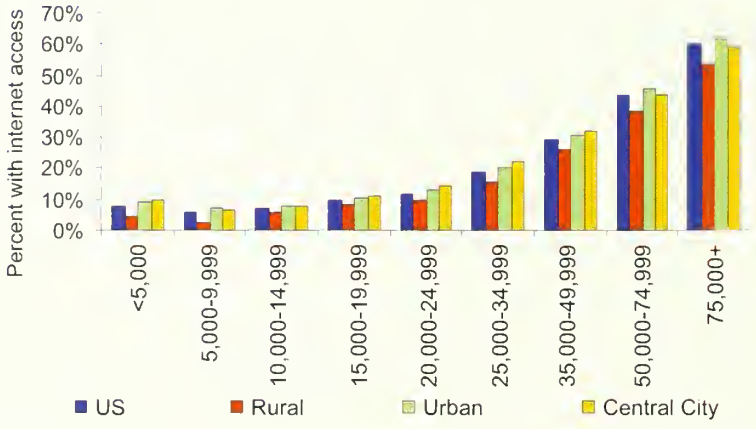
Source: U.S. Department of Commerce: Falling Through the Net, a national survey, 1998

Computer ownership and Internet access by race, 1998



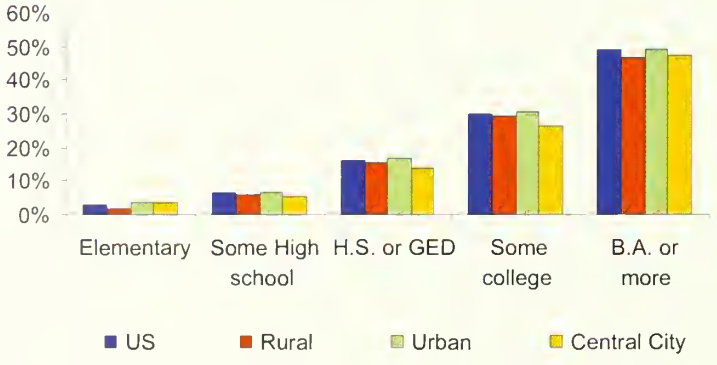
Source: U.S. Department of Commerce; Falling Through the Net, a national survey, 1998

Computer ownership and Internet access by income level, 1998



Source: U.S. Department of Commerce; Falling Through the Net, a national survey, 1998

Computer ownership and Internet access by education attainment level, 1998



Source: U.S. Department of Commerce; Falling Through the Net, a national survey, 1998

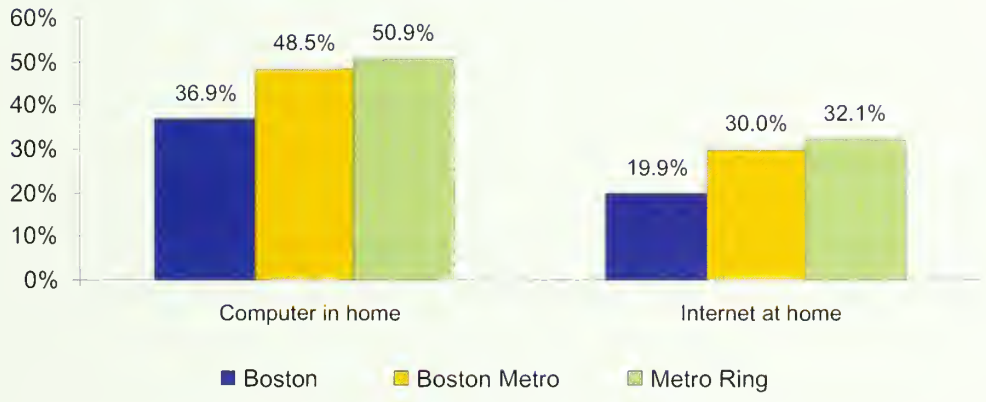
What does this mean?

The nature and pace of change that the information technology revolution heralds, can create unparalleled inequities among people. To understand this "digital divide," the U.S. Department of Commerce conducted a national survey titled, "Falling Through the Net: Defining the Digital Divide." The survey reports technology access disparities nationally, across race, income, and educational level. The survey also indicates that inner cities are facing the digital divide at a rate higher than rural areas and the national average, with Boston's technology-access rates two percent lower than the inner-city average.

Percent and type of Boston and Metro-Boston households with home computers and Internet access

COMPUTER AND INTERNET ACCESS VARY FROM 37% AND 20% FOR BOSTON; 48.5% AND 30% FOR METRO-BOSTON; AND 51%AND 32% FOR THE METRO-RING AREA

Percent of Boston and Metro-Boston households with home computers and Internet access, 1998



Source: Bureau of Labor Statistics, Current Population Survey, 1998.

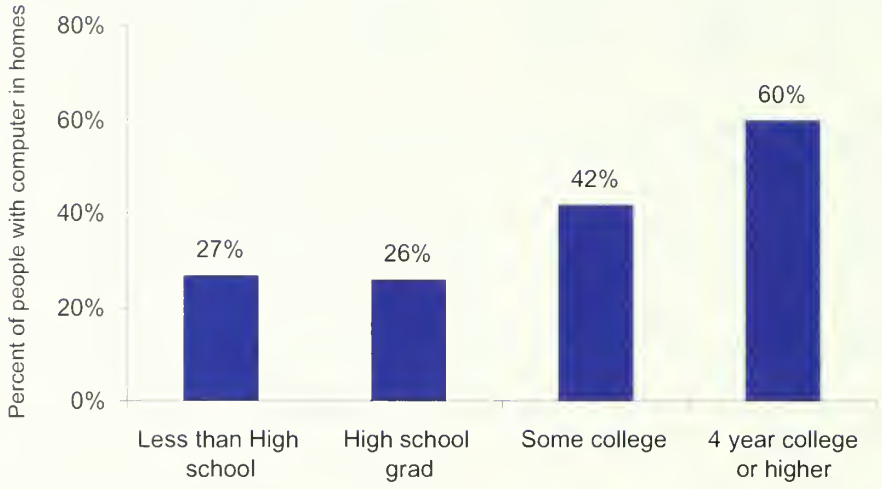
What does this mean?

The 1998 Current Population Survey conducted by the Bureau of Labor Statistics shows disparities in computer ownership and Internet access between Boston and the Metro-Boston region. Regional growth and development patterns (see Transportation section) show current and future residential growth in the area between Route 128 and I-495 or the Metro-Ring, where many of the information technology companies have located. This area also reports the highest levels of computer ownership and Internet access within Metro-Boston. To compete for high paying, high skilled jobs in the future, Bostonians need to increase their technological skills and access.

Percent of households with computer ownership in Boston, by educational attainment

SURVEY SHOWS THAT 60 % OF RESIDENTS WITH 4+ YEARS OF COLLEGE OWN COMPUTERS VERSUS 27% OF THOSE WITH LESS THAN A HIGH SCHOOL DIPLOMA.

Computer ownership by educational attainment in Boston, 1998



Source: Bureau of Labor Statistics; Current Population Survey, 1998

What does this mean?

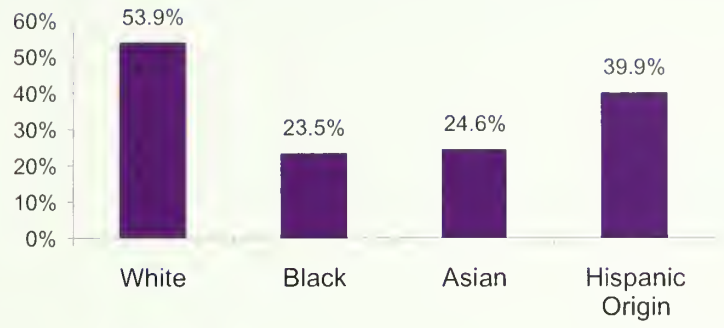
The survey reports that nationally, the level of ownership of home computers among adults who are not high school graduates is about half that of people with some college, and one-third that of adults with college or professional degrees. In Boston, the level of computer ownership beyond high school increases with educational attainment levels. The percentage for those with some college was almost 16% higher than for high school graduates, and the percentage for professionals and college-degree holders was 18 % higher than those with some college education.

Percent of Boston residents reporting computer ownership and Internet access by race and income

IN BOSTON, COMPUTER AND INTERNET ACCESS VARY WIDELY ACROSS RACE, WITH WHITE RESPONDENTS REPORTING ALMOST DOUBLE THE LEVEL OF ACCESS FOR BLACKS AND ASIANS.

INCOME DATA NOT AVAILABLE AT THIS TIME.

Combined computer ownership and Internet use by race and Hispanic origin in Boston, 1998



Source: Bureau of Labor Statistics; Current Population Survey, 1998

What does this mean?

White respondents in Boston reported more than double the level of computer ownership than black and Asian residents, and, for Internet use, six to nine times the rate in black or Latino homes. Additionally, computer ownership comparisons among income groups shows a disparity of one to nine between the lowest and highest income brackets among people surveyed. Even though computer ownership among Latinos was at almost 40%, Internet usage reported among Latinos was the lowest, at 3.2%, perhaps reflecting economic barriers to monthly Internet costs.

However, differences in Internet access rates may be more likely due to education and the occupation of a head of the household than to income and race. In recent years, the price of a computer has fallen below that of many television sets and the price of Internet access over standard phone lines averages less than $20 per month. Today, many companies offer free Internet access if the user allows advertisements to be shown on the screen while connected to the Internet. As more children become exposed to the usefulness of the Internet in the city's schools, computer and Internet use may become as ubiquitous as the television or telephone. Nationally, people of low to moderate incomes and people of color are among the fastest growing segment of Internet users.

Percent of households with access to high-speed Internet access

MORE THAN 80% OF HOUSEHOLDS IN BOSTON CAN ACCESS HIGH SPEED DIGITAL SUBSCRIBER LINE (DSL) SERVICE.

Source: Boston Redevelopment Authority, 2000

What does this mean?

As the Internet becomes more complex and its use more common in everyday life, demands for bandwidth (the rate at which data moves into and from the home computer) will increase. Use of the Internet at home over a dial-up account and modem is already becoming cumbersome as web pages add both video and sound. A modem is also very slow for those using the Internet for data-intensive research or in a home office involving the transfer of large amounts of data, although a modem is usually sufficient for general household use. New technologies such as cable modems and DSL can greatly increase the speed of Internet access in the home.

DSL operates over Plain Old Telephone Service (POTS) lines, yet is many times faster than modem service. Additional wiring is usually not necessary, but the home must be within 15,000 line-feet of a DSL-equipped telephone central office to receive the service. Every "central office"— central

switching facilities in a regional phone network — in Boston is now DSL-equipped, and over 80% of the homes in Boston can now access the high-speed service. However, this service costs about $50 per month compared to $10–$15 for dial-up access. Families already struggling to make ends meet may not be able to access these available services in view of other household priorities. The 20% of Boston homes that lack DSL access are located further than 15,000 feet from the central switching facility in their neighborhood.

Percent of youth reporting Internet use in Boston

BOSTON YOUTH SURVEYED REPORT THAT 86% HAVE ACCESS TO THE INTERNET IN SCHOOL AND 58% HAVE ACCESS AT HOME.

Source: Office of Community Partnerships, Boston Youth Survey, 1999.

What does this mean?

The 21st century workforce requires ease and familiarity with technology, which will become a fundamental requirement for all jobs in the future. Moreover, in the Information Age, unlike previous stages of technological innovation, young people are disproportionately the carriers of skills and knowledge compared to older people. For that reason, access to new information technologies among children and youth can quickly translate into skills transfers and other benefits for their families, friends and neighbors. For example, young people are now trained in the Boston Public Schools to help maintain school computers and electronic networks.

Efforts aimed towards youth have highlighted access to technology as a critical need and focused on access at school and at home. Recent survey data indicate high levels of access at schools and moderate access at home for Boston's high school students. However, informal surveys indicate that younger children and students at lower grade levels have relatively low access to technology in their homes, particularly at the elementary school level.

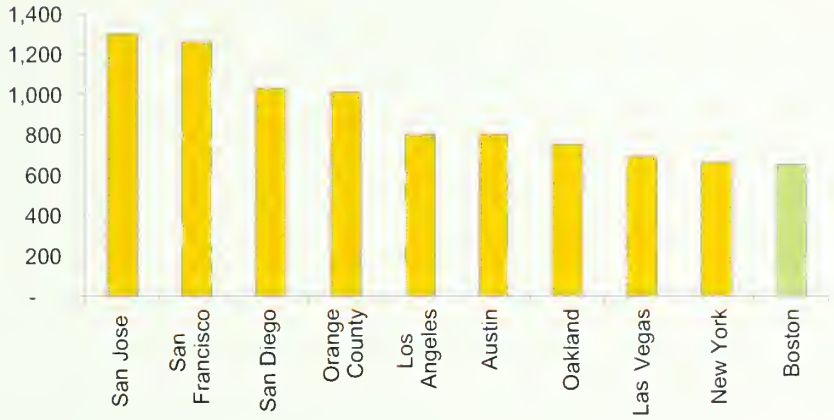
9.2 Use of Technology for Economic Development and Commerce

The development of the Internet has created the ability for everyone to participate in the global marketplace, and has contributed to the development of a global economy. Rapidly increasing information access on the Internet is opening up opportunities for increased marketing and sales for the retail, wholesale and services sector for consumers and among businesses. Today, with the development of electronic or e-commerce those with Internet access can order groceries, book airline tickets from home or their desk, order prescription medicines, get express deliveries, and do automated banking. Businesses can efficiently access credit card sale authorization, manage inventory, and reduce paperwork and warehousing costs through Internet based business-to-business transactions.

Number of Dot.com domains per 1,000 businesses in Metro-Boston

GREATER BOSTON HAS 652.7 DOT.COM DOMAINS PER 1,000 BUSINESSES, 10TH IN THE NATION.

Number of domain names per 1,000 businesses, Boston vs. other regions



Source: Yahoo Internet Life Magazine, March 2000

What does this mean?

Increased use of the World Wide Web can help both major corporations and neighborhood businesses compete more effectively through on-line sales, marketing, and promotion, while allowing for more successful integration into the global marketplace. In addition, the number of companies that have a Web presence is a good indicator of the proliferation of Internet users in the local market area, which in turn is a gauge of workplace Internet access and opportunities for workers to increase the technological skills so necessary to individual and regional economic success.

Number of graduates of computer-based workforce training programs

NO DATA AVAILABLE AT THIS TIME.

What does this mean?

Computer-based workforce development training programs not only prepare people to access jobs requiring technology skills but also help them to utilize on-the-job training programs through their workplace. With adequate computer training, Boston residents can more effectively participate in the high-growth sectors of the economy (finance, education, health care and high technology) as well as in the emerging areas of E-commerce, business-to-business commerce, and computer-based work.

Number of unfilled technology jobs

OVER 8% OF TECHNOLOGY JOBS WENT UNFILLED FOR OVER SIXTY DAYS IN THE LATE SPRING 2000, MUCH HIGHER THAN THE 1%–2% NATIONAL RATE.

Jobs unfilled in the high technology sector, 2000

Web design developer	24.9%
Computer programmer	14.9%
Life scientist	11.0%
Physical scientist	10.1%
Electrical/computer engineer	10.0%
IT professional	8.5%
Technicians, general	8.2%
Skilled production workers	8.0%
Engineers, all other	7.9%
IT technicians	7.7%

Source: The Boston Globe, State's high-tech job vacancies go unfilled, September 3, 2000
Research: The New England Council, Center for Labor Market Studies at Northeastern University, Massachusetts Technology Collaborative

What does this mean?

A comprehensive survey of 310 Massachusetts high-tech companies by Northeastern University researchers found that many are struggling to fill high-tech jobs. Companies surveyed included biotechnology, computer, software, medical devices, tele-communications, and Internet companies, which together employ 45,000 people throughout Massachusetts. The companies surveyed, according to the Massachusetts Technology Collaborative, are drivers of innovation, growth, and wealth creation in the state. An inadequate supply of workers can affect their expansion and could even force them to relocate to other areas as they grow. Two approaches to the high tech labor shortage have been proposed: 1) importing high-skilled workers from other areas and countries, and 2) training Bay State residents. Both strategies will possibly be necessary — one short-term and the other long-term. This underscores the urgency, in Boston and the region, of improving educational and training opportunities and outcomes for all residents.

The survey found many unfilled jobs in the state's high technology growth sector. Computer science, programming,and electrical and computer engineering combined made up 30% of the unfilled jobs. The highest rate of unfilled jobs was in web-design development at 25%, followed by computer programming at 14.9%.

9.3 Use of Technology for Community Building

With the development of Internet technologies, access to knowledge and information about resources is now within our reach, as is our ability to provide information about ourselves, our work, and our communities. The Internet is increasingly being used to gain information about and access to medical care, civic and political participation, life-long learning, recreation and entertainment. It has changed the concept of community, creating new virtual communities, and is also providing connections among local, global, and linguistic communities. It also offers great potential for linking people in local communities and in neighborhoods, providing a forum for civic dialogue and information about local happenings, issues, and the delivery of services.

Number of interactive neighborhood-based computer networks and Web sites

DATA NOT AVAILABLE AT THIS TIME.

What does this mean?

Across the nation, community outreach, planning and advocacy projects are increasingly using technology to strengthen civic fabric, facilitate dialogue, increase networking and build community and solidarity on issues of concern. Community organizations are using technology to conduct surveys research programs and services, share best practices, seek resources, communicate with constituents, and solicit funding and volunteers. Though there is no reliable data available at this time, local examples of this already exist in neighborhoods such as the South End, South Boston, Roxbury, and Dorchester, and in Boston's Empowerment Zone, where web sites have been set up to help residents access resources from small businesses and social services, contribute their own opinions and communicate with one another.

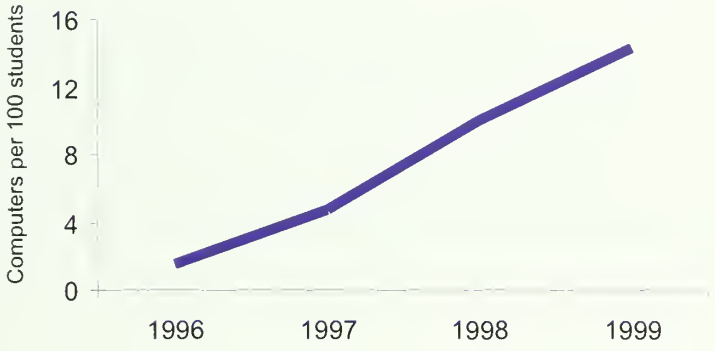
9.4 Use of Technology for Teaching and Learning

Computer literacy today has become fundamental to the education process, both because it is a prerequisite for employment in practically any field and because it enhances our ability to access information. As a tool for teaching and learning, computers are used extensively today for broadening horizons, accessing information, and linking us with ideas and activities across the world. They have also created the capacity to track and link research that tells us about the interconnectedness of issues across the nation and across nations. They are also offering opportunities for "distance learning," in which universities provide lectures and student feed-back over the Internet.

Number of computers per student in the Boston Public Schools

THE BOSTON PUBLIC SCHOOLS HAVE ONE MULTI-MEDIA COMPUTER FOR EVERY SEVEN STUDENTS (14 COMPUTERS PER EVERY 100 STUDENTS).

Number of computers per 100 students in the Boston Public Schools, 1996-1999



Source: Boston Public Schools

What does this mean?

The City of Boston has taken the technology challenge in the Boston Public Schools very seriously, as evidenced by the rate at which access to computers for students has changed in the past three years. In 1996, when the Mayor set new goals for school based computer access, Boston had one computer for every 63 students. By 1997, the ratio was one to 21; by 1998 the ratio had decreased to one computer to 10 students; in 1999, the city's public schools contained one multi-media computer for every seven students. Boston's schools are rapidly moving toward the goal of one computer for every four students by the year 2001.

Percent Boston Public Schools with Internet access

100% OF BOSTON PUBLIC SCHOOLS WERE WIRED FOR INTERNET ACCESS BY 1998, A NATIONAL FIRST.

Source: Boston Public Schools

What does this mean?

Schools need to have multiple computers connected to the Internet in order to make this resource available to students as a learning tool. Boston's government, business and community partners have made access to technology a major priority for the city's public schools by linking all of the schools to the Internet and increasing access to computers for both students and teachers. Boston's Partners in Technology, an impressive coalition of public, private, academic and philanthropic partners has generated over $20 million from the private sector, $10 million from foundations, state, and federal government (not including E-rate subsidies), $65 million from E-rate subsidies, and $50 million from the City of Boston. By the fall of 1998, 100% of Boston's public schools were wired for Internet access through a "starter" network, up 96% from 1995 and a national first.

Number of teachers using technology as a teaching tool

80% OF BOSTON'S TEACHERS HAVE BEEN TRAINED TO USE COMPUTERS FOR CLASSROOM LEARNING.

Source: Boston Public Schools

What does this mean?

The National Science Foundation Index released by the U.S. Department of Education in January of 1998 cites a survey of 3,560 elementary and secondary school teachers, in which about 80% of the teachers reported having technology training, but just 20% of those teachers felt well prepared to using computers as a teaching tool. Only one in five teachers reported that they were very well prepared to use computers in the classroom.

Recent data from the Boston Public Schools indicate that 80% of the teachers have been trained to use computers for classroom teaching and that 60% often use computers as a teaching tool.

9.5 Access to Local Media

Neighborhood newspapers and non-English radio stations provide mechanisms through which local neighborhood issues can be communicated and debated. They also serve as a locus of marketing by neighborhood businesses and of announcements about community events. Likewise, non-English radio stations target ethnic/linguistic communities, providing important information not otherwise available and a forum for the discussion of issues, regardless of literacy levels.

Number of neighborhood newspapers and non-English radio, television stations, and newspapers

ELEVEN OF BOSTON'S NEIGHBORHOODS HAVE THEIR OWN NEWSPAPERS. BOSTON HAS THREE NON-ENGLISH RADIO STATIONS AND NINE NEWSPAPERS SERVING NON-ENGLISH SPEAKING POPULATIONS.

What does this mean?

Boston has a variety of print media for specific communities such as the African-American, Latino, Irish, Russian, and Asian communities. These news vehicles provide an important way to reach populations that are geographically dispersed but share common concerns. They include two daily newspapers and four weekly newspapers. Another nine newspapers serve particular common-interest groups. Eleven neighborhood newspapers in Boston cover a range of issues and events. Daily newspapers,

whose readership and distribution is the widest, tend to provide more limited positive coverage of life in Boston's neighborhoods and less specific information about neighborhood resources and daily life.

Although Boston has nearly 30 AM and FM radio stations, only two non-English radio stations have been identified. Both are AM stations focused on the Latino community: WBPS and WUNR. Another AM station, WILD, is the only African-American radio station in the city. However, a number of stations provide special programs for non-English speaking ethnic groups.

Boston currently has two local TV stations —WBZ-TV4 and WCBV-TV5—providing foreign language programming for English-speaking radio stations with multi-lingual or multi-cultural programming. Public access channels (BNN-TV's channels 3 and 23) provide a range of neighborhood and community-based programming and opportunities for skills training.

Hours of local programming on local TV stations

BOSTON'S LOCAL TV STATIONS HAVE A HIGH LOCAL VIEWERSHIP DESPITE THE ACCESS TO CABLE CHANNELS.

DATA ON HOURS OF LOCAL PROGRAMMING NOT AVAILABLE AT THIS TIME.

What does this mean?

A high degree of local viewership provides more opportunities to present local issues to a local audience as well as the local implications of national issues. Local neighborhood issues, business marketing, and community and public service announcements can also be communicated through this mechanism. Local television also provides greater access to information for non-English speaking populations. Boston currently has two stations providing foreign language programming (WBZ-TV 4 and WCBV-TV 5) and public access stations providing a range of multi-lingual, neighborhood and community-based programming. Public access stations also provide skills development in program development and production. Boston's local TV stations have high local viewership despite access to cable channels. This and the affiliations of local TV networks with major, independent and public education networks offer a high potential for civic journalism focused on local issues. However, many Boston viewers voice concerns about increasing coverage of crime and violence at the expense of Boston's considerable "good news" events and statistics.

SECTION TEN

Transportation

Vision

A community with a safe, affordable, and seamless transportation system that enhances community life, provides convenient access to jobs and recreation and offers a variety of modes of travel.

Indicators of an Effective Transportation System	Measures	How Is Boston Doing?
10.1 **Planning that Reduces Sprawl**	■ Changes in regional demographic and development patterns	■ While regional population has held steady, the number of households has increased, indicating sprawl, with loss of natural areas
10.2 **Affordable and Convenient Access for All Residents**	■ Percentage of residents within 1/4 mile radius of rapid transit	■ 37% of Boston residents live within 1/4 mile of rapid transit and 98% within proximity of public transport
	■ Average travel time to work by neighborhood	■ Most Bostonians travel to work in less than 30 minutes
10.3 **Environmentally Sound Regional and Local Transportation Systems**	■ Vehicle miles traveled	■ Vehicle miles travelled in the region will increase by 5 times the rate of population growth by 2020 if current trends hold
	■ Number of people who drive alone to work in the metro region and in Boston	■ Almost 45% of the region's 500,000 commuters drive alone to work
	■ Car ownership among regional and Boston households	■ According to the 1990 Census, at least 83% of the region's households and 70% of Boston households owned at least one vehicle
	■ Number of public transportation buses and state fleets that use alternative fuels	■ Only 19 of the 1,018 public transport buses operated by the MBTA run on alternative fuels; more purchases are planned
10.4 **Options that Enhance Health and Community Life**	■ Subway and commuter rail ridership	■ Subway ridership has increased only slightly over the past 10-15 years
	■ Number of people who bike/walk to work	■ Over 40% of the people who live in downtown Boston's neighborhoods bike or walk to work
	■ Number of miles of bike paths in Boston	■ Boston has 3 major bike paths: the Esplanade, Jamaicaway, and Southwest Corridor
10.5 **Safe, Reliable and Comfortable**	■ Pedestrian and motor vehicle accidents in Boston	■ In 1997, pedestrian accidents decreased by 2.9% and motor vehicle accidents by 6% in Boston
	■ Customer perception of crime on the public transportation system compared to actual crime	■ Nearly 44% of people surveyed in 1996 indicated that they felt safe on the "T"
	■ Timeliness of buses and public transit	■ Data not available at this time
	■ Cleanliness and quality of bus shelters, transportation vehicles and stations	■ Data not available at this time

Transportation

Historical Context

Boston's idiosyncratic street pattern evolved over centuries. The city grew through the successive filling of marshes and bays, annexing nearby communities and creating a transportation network in response to a changing economy. The transportation system of the entire region is built on a hub and spoke web of rail lines, streets and highways, with Boston at the center. Boston was and is also a water transportation destination for the region. Finally, Boston is a city of well-defined neighborhoods, each with its own history, strong identity and point of view about Boston's choices for the future.

Enriched and constrained by Boston's inherited transportation system, today's priorities offer new challenges. For example, the rapid transportation system that has served Bostonians so well in the past in accessing jobs is now unable to take them to the majority of new jobs in the region. More than 75% of new jobs are now located outside of Metro-Boston's Inner-Core communities; many of these are entry-level jobs critical to people entering the work force from welfare or school. However, the city of Boston retains a wealth of good jobs to which many people commute each day from its neighborhoods and suburbs. Boston's workforce population more than doubles during the daytime hours as commuters enter the city limits.

Regional Context

Boston — with its economic activity, population density, and diversity of cultural and educational facilities — drives New England's growth. The interstate highway system provides access to downtown Boston. Amtrak and commuter rail lines terminate at Boston's North and South Stations. Ferry service connects the North and South Shores to Boston's wharf districts. The Massachusetts Bay Transportation Authority (MBTA) rail and commuter lines converge radially on Boston's downtown. Logan Airport is the region's major airport.

Metro-Boston transportation policies are, therefore, integral to enhancing the quality of life in Boston and the region. Future decisions will determine whether the region will choke in sprawl and traffic or, alternatively, provide safe and comfortable public transportation for residents and visitors, access to the region's open spaces, waterway transportation, and affordable, accessible public transit to job centers.

Traffic is now growing in the region at more than 2.5% per year, and 80% of the region's expressways are congested during rush hours. Expected increases in automobile travel will significantly increase pollution levels by the year 2010. For example, the Big Dig, when completed is expected to carry 50,000 more vehicles to ease traffic flow.

Efforts to mitigate the environmental impact of this increase in vehicular traffic include the extension of the region's commuter rail lines such as restoration of the Old Colony line to the South and extension of commuter rail to Newburyport to the North. Amtrak's high-speed rail service to New York — long a dream of Boston's transportation planners — will some day provide a three-hour trip between cities. Ferry service in Massachusetts Bay, especially during rush hours, is also being expanded. Funding for water transportation is expected to triple in the next decade, and is projected to expand water transit ridership by 302% — to 4.7 million — by 2010. However, many planned bus service improvements and other MBTA transit upgrades are stalled, in part due to Big Dig cost overruns and competing priorities.

As the economy grows, so do demands on the already-over-capacity Logan Airport. Plans to expand Logan Airport, however, are clouded with controversy, with many communities voicing opposition to more noise and pollution. Enhanced air service in Providence, Rhode Island, and Manchester, New Hampshire, is adding to the region's airport capacity. Planners are reviewing all options for still greater expansion of air travel in and around Boston.

Citywide Context

Boston is rich in public transportation resources and is known as a "walking city," in which a car is not necessary for many people. More than 98% of Boston residents live within a quarter mile of public transportation. Public transportation can take residents, workers and visitors to most of the city's jobs, open spaces and cultural resources. However, residents dependent on bus service are less well served than those who are able to access rail transit.

Today, Boston is heading into a robust period of development, with over $2 billion dollars of investment in buildings expected in the next five years. This new growth will challenge Boston's livability and create new demands on its transportation systems. Boston's population is also expected to have grown by more than 25,000 residents between 1990 and 2000.

New centers of growth are now emerging adjacent to the dense financial district. With Boston's increasing racial/ethnic diversity, a resurgence of young professionals and empty-nesters has occurred. Boston's "squares" — downtown and in the neighborhoods — are again centers of community life. Bostonians — somewhat in keeping with a national trend — are looking for safety on the street and affordable connectivity to work, home and the area's rich cultural heritage. They also seek access to choices in travel modes such as safe paths for pedestrians, bicyclists and skaters, and to amenities within walking distance.

Downtown Boston and the city's growth frontier, the Seaport District in South Boston, include vibrant residential areas adjacent to commercial and industrial land uses. These are also close to the nation's biggest highway project, the multi-billion dollar Big-Dig (Central Artery/ Tunnel Project), now due to be completed in 2004. Once completed, the Big Dig will rationalize through-traffic, facilitate connections to the airport and other major destinations, and provide new land for downtown reuse. This land will be used to reknit the city's historic downtown street patterns and create new green and open spaces and other pedestrian amenities.

According to a recent Boston Globe survey, 15 new developments will be completed in the next five years in areas adjacent to the Big Dig. New districts of economic growth are also emerging outside the downtown core in areas such as the Longwood Medical Area, the Albany Street Corridor at the edge of the South End and Crosstown Industrial Park at the edge of Roxbury, as well as in the Fenway and the Back Bay.

The City of Boston is working with local businesses, resident groups and groups such as Walk Boston to ensure that traffic can access new highway infrastructure while preserving the neighborhood scale that defines and enhances the city:

- **A new pedestrian-friendly surface street system** has been designed to be built over the depressed Central Artery, re-linking residential streets and Boston Harbor to downtown Boston.
- **Transportation studies** are underway for the Chinatown/Washington Street and Seaport areas to manage the cumulative impact of new development.
- **The development of Turnpike air-rights parcels** will be coordinated through a master planning process to balance regional needs with the concerns of the Chinatown, Back Bay and Fenway neighborhoods.

Neighborhood Focus

Boston's neighborhoods are characterized by walkable connections and the vibrancy of their central main streets and squares — the centers of community life. But because public transportation developed primarily in order to access jobs downtown, transit links between the neighborhoods are lacking.

In the last decade, new centers of economic and cultural activity have emerged in Boston's neighborhoods as the city's population stabilized and then increased due to the arrival of new immigrants and other newcomers.

Three major planned projects illustrate Boston's effort to address transportation connectivity in

and among the neighborhoods, as well as to jobs and cultural resources:

- **The Urban Ring** — a planned new public transit loop linking the residential communities of Dorchester, Roxbury, Fenway, Charlestown, Cambridge, Somerville, Chelsea and East Boston with major employment centers outside the city core and with Logan Airport. This fall a circumferential bus route will begin service.

- **The Silver Line** — a new clean-fuel bus service to be added to Boston's current transit system to link the South Boston Waterfront, Chinatown, the South End, Lower Roxbury and the Franklin Park Zoo — finally beginning to address the need for replacement service for the old Orange Line through Roxbury. However, some advocates remain convinced that the Silver Line should be a light rail rather than a bus system.

- **Huntington Avenue** — Boston's "Avenue of the Arts" to be rebuilt with enhanced transit facilities.

- **The Main Streets Program** — the City of Boston's commitment to upgrading businesses and commercial nodes in 19 Boston neighborhoods, re-establishing neighborhood commercial districts as vibrant centers of economic activity and community life. Main Streets Transportation Action Plans address issues such as parking, circulation, access to transit and enforcement of traffic laws.

Other projects are planned to expand the range of transportation options available to residents. This will enhance the quality of life and meet the needs and aspirations of Boston's increasing number of visitors, businesses and residents.

Other new initiatives will also transform Boston in the coming decade:

- **Streetscape guidelines for Boston's major roads** provide for the equitable sharing of the public right-of-way between motor-vehicles, pedestrians, bicycles and transit. The new guidelines include plans for bus shelters, news kiosks, street trees, and other amenities.

- **Strategic utilization of federal dollars** to improve existing and to create new pedestrian and bicycle paths.

- **Implementation of design and traffic management strategies to "calm" traffic** on Boston's residential streets.

Remaining Challenges

- **Cost overruns on the Big Dig, now estimated to cost $14 billion — more than four times original estimates — are drawing resources from other planned transportation improvements,** such as upgraded bus service for the MBTA's 366,000 bus users and infrastructure investment throughout the Commonwealth.

- **Bus riders continue to be underserved by the MBTA.** A 1999 draft consent order issued by the State Department of Environmental Protection called for an additional 200 buses to be added to the MBTA fleet. However, the final order, signed in August, 2000, did not include expanded bus service. Bus riders lack shelters at most stops, and most older buses are not accessible and run on polluting diesel fuel. Bus riders in Boston and in the region are disproportionately elderly, low-income and of color.

- **Access to entry-level and other new jobs in the region are often located in areas far removed from public transportation.** This poses a major challenge to entry-level workers such as those transitioning from welfare to work, as well as to their employers. The U.S. Department of Labor granted $4.5 million to the Metropolitan Area Planning Council to develop and implement a strategy to address current gaps in service, but full-scale solutions will require an unusual level of regional coordination and a commitment to new transportation resources.

- **South and North Stations should be linked to provide seamless rail transportation** to and from Boston's neighborhoods, Inner Core municipalities and outlying cities and towns.

- **Few MBTA buses currently run on clean alternative fuel.** The oldest 200 buses in the MBTA fleet, now past their scheduled retirement age, are also the dirtiest. Given the rise in asthma

and other respiratory ailments, particularly in Boston's low-income communities of color, the number of clean-fuel new buses must be increased significantly and the burden of pollution generating maintenance and storage facilities shared equitably across neighborhoods and communities. The purchase of 100 additional clean-fuel buses is planned.

- **Event-related transportation pressures in Boston and the region will increase significantly in the coming decade** as sports industries and cultural and educational institutions gear up for major expansion.

- **Many MBTA stations and buses remain inaccessible for people with physical disabilities.**

- **Massport is seeking to expand Logan Airport through addition of a runway. Many groups from neighborhoods across the city and City Hall oppose this expansion due to noise, traffic and other concerns while most business groups support it.** How metropolitan Boston can address its need for expanded airport capacity as well as for a high quality of life in densely settled areas is a pressing question.

- **The magnitude of new development in Boston requires careful planning and intensive consultation with residents and other interest groups to achieve the best results.** Bostonians have a history of wrangling over options for new growth and change. While challenging to manage and sometimes frightening to behold, Boston's hard-fought, hard-won compromises almost always improve the outcome. They have also tended to protect Boston's human scale and character— paradoxically the very things that attract new development and residents.

Transportation Indicators

10.1 Planning that Reduces Sprawl

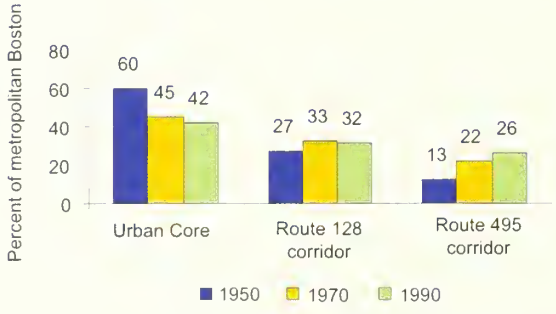
Patterns of land use and travel have a major impact on the health of the environment, the economy, and the health of residents in Metro-Boston. These have been changing dramatically over the past 50 years, transforming the region from an area of tightly knit communities to one increasingly characterized by suburban sprawl. Sprawl creates segregated land use patterns, moving jobs from the urbanized core, where labor and services are in abundance, to areas further and further away. Successful integrated planning policies encourage us to look at the impact of land use planning decisions and transportation strategies on human and environmental health and on future economic growth. Ideally, they connect and build upon the advantages of labor, markets, services and infrastructure in urban areas while helping to preserve important environmental resources and amenities. Boston's jobs, its quality of life, and its vibrant cultural amenities are already attracting suburbanites back into the city. Sustainable, equitable growth, however, will ensure that this new appreciation of urban life results not in widespread gentrification and displacement but rather in mixed-income, high-density cluster development near transit nodes throughout the region.

Also see Environment and Public Health sections.

Changes in regional and local demographics and development patterns

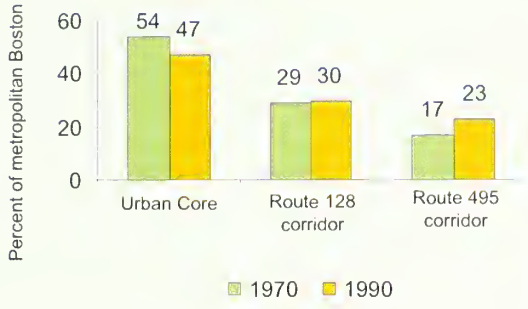
WHILE THE REGIONAL POPULATION HAS HELD RELATIVELY CONSTANT SINCE THE 1970S, INCREASES IN THE TOTAL NUMBER OF HOUSEHOLDS ALONG ROUTES 128 AND 495 INDICATE SPRAWL.

Metro-Boston population shifts, 1960–1990



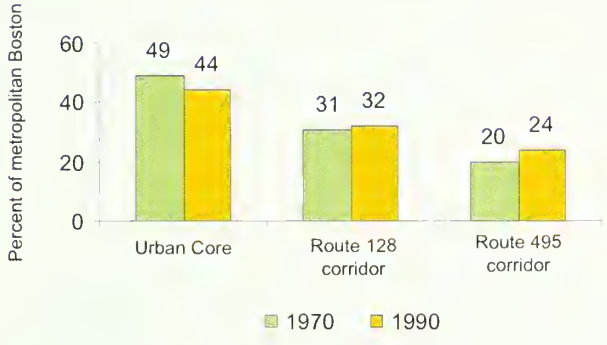
Source: Boston MPO Transportation Plan 2000-2025: Existing Conditions, Metropolitan Area Planning Council

Metro-Boston economic growth shifts, 1970–1990



Source: Boston MPO Transportation Plan 2000-2025: Existing Conditions, Metropolitan Area Planning Council

Metro-Boston households, 1970–1990



Source: Boston MPO Transportation Plan 2000-2025: Existing Conditions, Metropolitan Area Planning Council

What does this mean?

Over the past two decades, people and jobs have continued to move out of dense urban areas, leaving behind brownfields, inderutilized business districts, and abandoned residential stock in favor of new suburban development. Between 1960 and 1990, the urban core communities lost about a third of their population, while that of the I-495 Corridor doubled. The steady sprawl caused by population and job shifts away from the urban core out to the circumferential Route 128 and, more recently, I-495, has resulted in a dramatic loss of forest, open space and agricultural land (*see Environment section*). The lack of access to rapid transit in these areas is also increasing infrastructure costs, travel time, pollution, and congestion. Recent growth patterns indicate that development is projected to continue to grow between the 128 and 495 corridors, eventually eliminating much of their attractiveness.

10.2 Affordable and Convenient Access for All Residents

The equitable access and distribution of transportation resources make for a sustainable city. The average automobile costs 47¢ per mile to operate, straining the budget of low-income households. As a result, many Boston residents depend upon public transportation to get to work and run errands. Boston is fortunate to have an extensive public transportation network, with buses, trolleys, rapid transit lines, and commuter rails. The system is relatively inexpensive and contributes greatly to the quality of life in Boston. However, to further increase the use of the "hub and spoke" system in Boston requires more connections across the spokes (transit lines), clean-fuel buses, a greater number of buses, amenities such as bus shelters, and better connections among centers of population and job centers.

Percentage of residents within a 1/4 mile radius of rapid transit

37% OF BOSTON RESIDENTS LIVE WITHIN 1/2 MILE OF RAPID TRANSIT RAIL. OVER 98% LIVE WITHIN 1/2 MILE OF PUBLIC TRANSPORTATION.

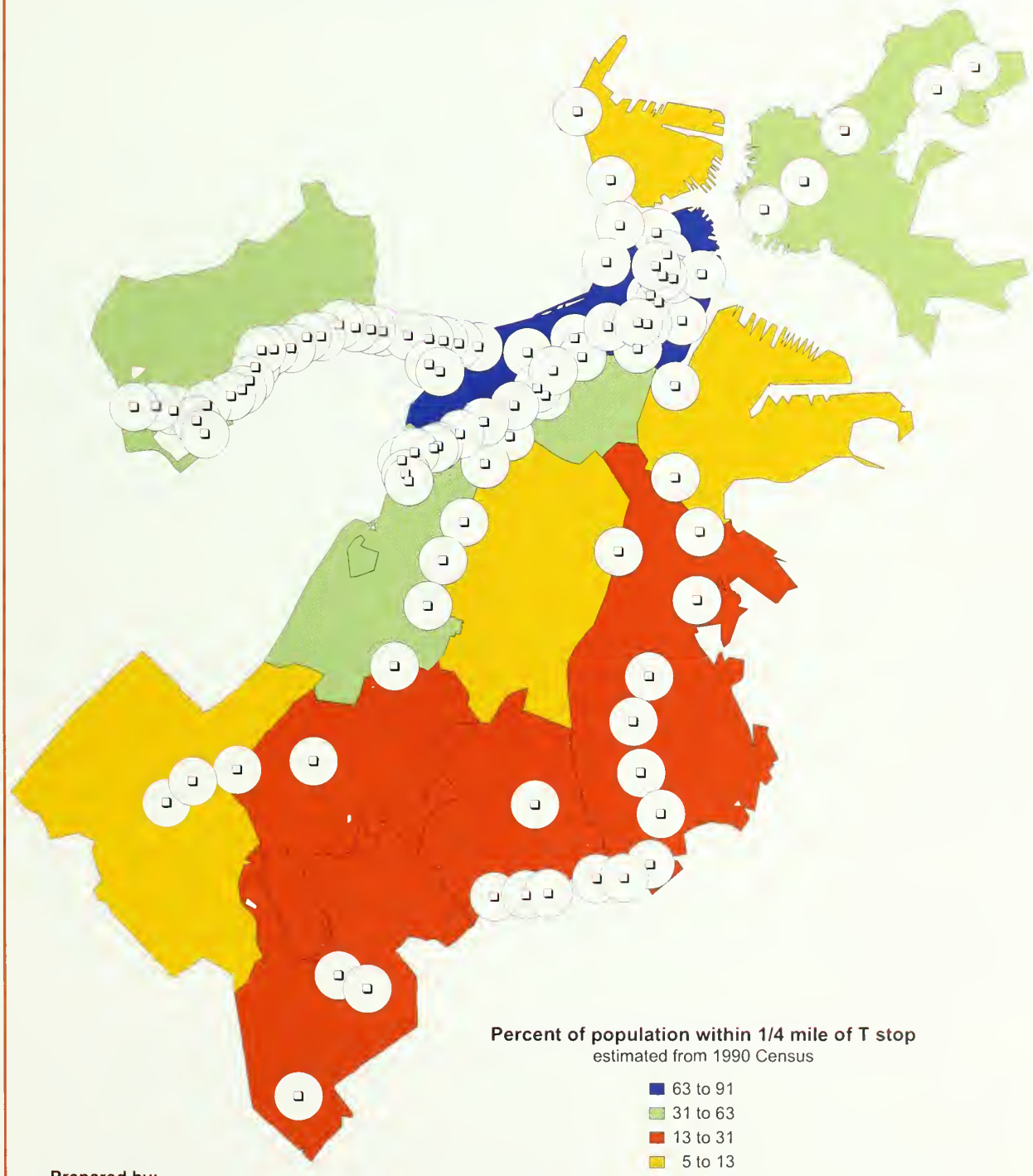
See following map on rapid transit access on the page that follows

What does this mean?

People who live within walking distance of a rapid transit, or T, station are far more likely to use public transportation than those who need to drive or take a bus to make a connection. Development that enables people to live near T stops contributes to a sustainable city in several respects, including reduced automobile use, better air quality, and higher densities of residents to support local commercial and cultural activities.

Boston's well-developed transportation system provides almost 100% of its residents with access to some form of public transportation within a quarter mile of their homes. Rapid transit (the T) is desirable because it is time efficient, inexpensive, and reduces automobile use, which results in less noise and congestion on city streets. While the public transportation system is accessible to most, however, it is not always convenient, as at least one mode change (i.e., subway to bus, subway to subway, or bus to bus), is often required to access jobs and services. Only 32% of employers are within one-quarter mile of rapid transit; 43% are within a one-half-mile radius; and 58% are within a one-mile radius.

Rapid transit T stops in Boston

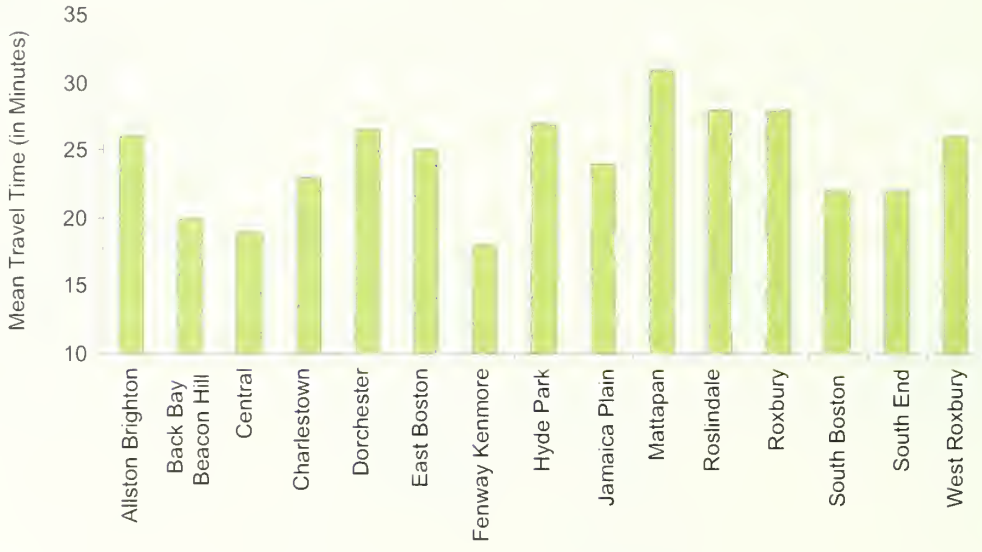


Prepared by:
Alan Saiz, Dept. of Information Services
Northeastern University

Average travel time to work for residents by Boston neighborhood

MOST PEOPLE WHO LIVE IN BOSTON USE LESS THAN 30 MINUTES TO GET TO WORK, BUT THIS IS CHANGING.

Average travel time to work by neighborhood, 1990



Source: U.S. Census, 1990

What does this mean?

The ability to physically get to work is as important as possessing the skills needed to get a job. As Boston's economy shifts from manufacturing to services, many of Boston's less educated workers are left to find employment outside the city. Boston's radial transportation system is centered on the downtown, and this works well for those who commute to work there. However, with most of the new entry-level jobs concentrated in the Route 128 and 495 beltways, there are fewer jobs for entry-level workers that can be reached from Boston's neighborhoods within 30 minutes using public transportation. This poses a particular problem for people transitioning from welfare to work, making access to jobs difficult if not impossible. Only 24% of welfare mothers in Boston reported owning an automobile, but most need to transport a child to child care before and after work. Other concerns, including hours and frequency of transit operations, security concerns at isolated bus stops and transit stations at non-peak hours, and lack of proximity to childcare providers make public transportation less attractive and less convenient for this population. The MBTA is also not always accessible for people with physical challenges.

Census data show that the average travel time to work for most Bostonians is about 24 minutes. A myriad of factors influence commuting time: automobile ownership; transit access; highway access; traffic patterns; and location of employment. Those living in neighborhoods located near downtown, where many jobs are located, have some of the shortest average travel times, while those living in residential neighborhoods where there are relatively few jobs and less access to rapid transit lines tend to have higher-than-average commuting times. For example, Fenway/Kenmore and Central Boston neighborhood residents have the shortest commuting times, while those living in Mattapan, Roxbury and Roslindale have the longest commuting times. A high percentage of a neighborhood's workers walking to their place of employment seems to account for short average commuting times.

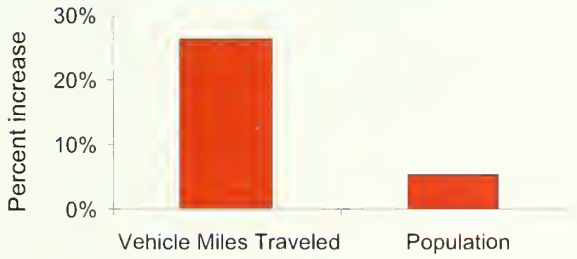
10.3 Environmentally Sound Regional and Local Transportation Systems

The World Resources Institute report, "State of the World, 1999" projects that world oil production is expected to peak by the year 2010 and then begin to decline. The study also states that 79% of emissions from mobile sources are the major contributing cause of air cancers. Experts believe that long before oil runs out, the environmental and health burdens of using it may force us to switch to cleaner energy. Our region's dependence upon non-renewable natural resources, however, is still growing, as evidenced by an increase in automobile ownership. An environmentally sound regional transportation system will greatly improve environmental quality and residents' quality of life, ease traffic congestion on highways and in job centers such as Boston, and prepare us for the future when oil reserves decline.

Vehicle miles traveled in Metro-Boston

SINCE 1970, VEHICLE MILES TRAVELED HAVE INCREASED BY 75% IN THE REGION, BUT THE POPULATION GREW BY ONLY 10%. THE NUMBER OF VEHICLE MILES TRAVELED IS EXPECTED TO GROW AT A RATE FIVE TIMES FASTER THAN POPULATION GROWTH BETWEEN 1990 AND 2020 IF CURRENT TRENDS CONTINUE.

Projected vehicle miles traveled vs. projected population growth, 2020



Source: Metropolitan Area Planning Council

What does this mean?

The increase in vehicle miles traveled indicates a move away from sustainability, as gasoline-fueled automobiles contribute to air, water, and noise pollution as well as traffic congestion. Automobile use also contributes to urban sprawl and lessens the likelihood of participation in neighborhood and community life, which can have negative effects on public safety and commerce. (Harvard Professor Robert Putnam in his book "Bowling Alone" reports that every 10 minutes of commuting time reduces social and civic activities by 10%.) Of particular concern, also, are the health impacts of pollution caused by automobile emissions.

The *Boston MPO Transportation Plan 2000-2025: Existing Conditions* points to an increase in automobile ownership as people move outwards from the urban core into areas that do not have adequate transit services. However, even cities like Boston, which have a relatively good transit system, saw a 14% increase in the automobile ownership rate between 1980 and 1990. The study also points out that the number of vehicle miles traveled is projected to increase by 26% between 1990 and 2020, outpacing population growth, which is projected at 5% over the same period. (A recent report by the

State's Executive Office of Environmental Affairs states that vehicle miles travelled in the region have increased by 75% since 1970, with only a 10% increase in population.) The daily vehicle miles traveled regionally, by all forms of motor vehicles in 1995, was 62.5 million miles. Over 80% of that travel occurred on highways and arterial roads. This calls for encouraging shared transportation strategies, high-occupancy vehicles, fuel-efficient vehicles, and, most importantly, cleaner transportation systems linking cities and towns.

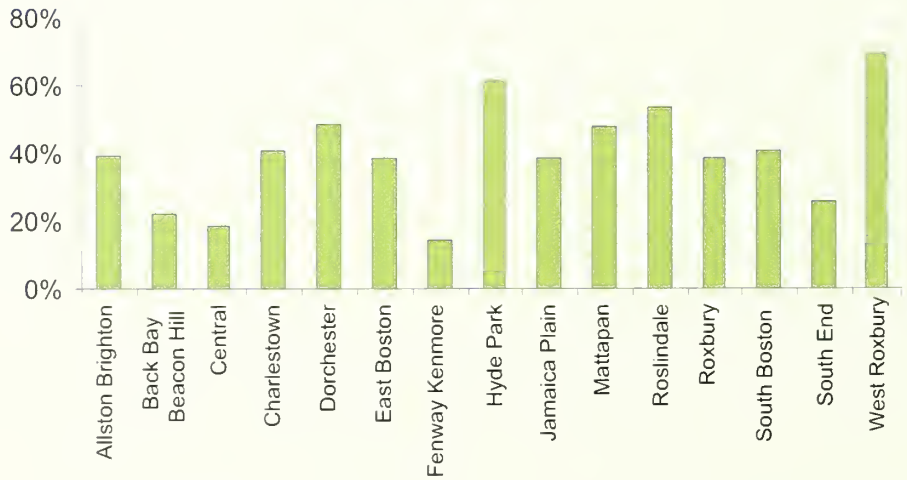
Number of people who drive alone to work

THE NUMBER OF PEOPLE DRIVING ALONE TO WORK IN BOSTON ROSE 7% BETWEEN 1980 AND 1990.

Number of Metro-Boston commuters who drive alone to work, 1990

Source: U.S. Census, 1990

Number of Bostonians who drive alone to work by neighborhood, 1990



Source: U.S. Census, 1990

What does this mean?

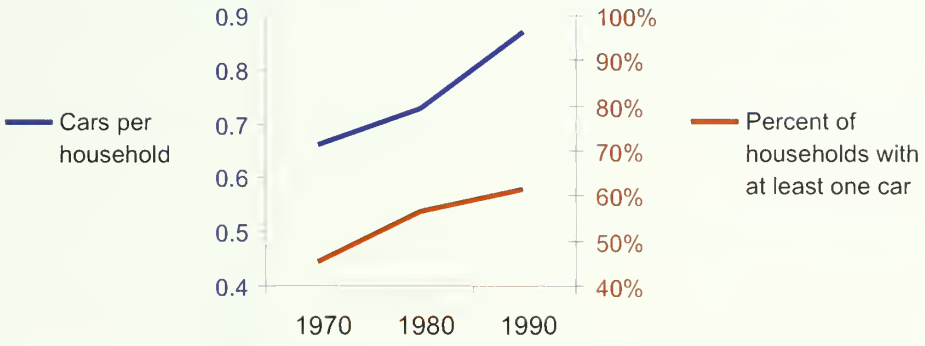
Neighborhoods that are home to a large percentage of people who drive alone to work are not as sustainable as those in which a smaller percentage of workers take a Single-Occupancy-Vehicle (SOV) to work. A high percentage of SOV use could indicate a lack of public transit serving the neighborhood, inconvenient scheduling of trains and buses, or inconvenient, unsafe stations and stops. A high percentage of SOV use may also indicate that the existing transit does not allow people to get where they need to go or a lack of awareness on the part of drivers of the environmental impacts of automobile use. Boston has one of the best transit usage rates in the nation and, as a result, relatively few people drive alone to work. However, usage varies among neighborhoods.

Beacon Hill/Back Bay, Central Boston, the South End and Fenway/Kenmore all have SOV rates below 30%, while the more suburban-style neighborhoods of Hyde Park, West Roxbury, and Roslindale all have rates above 50%. The citywide average in 1990 was 40.1%, up from 33. 2% in 1980.

Car ownership among regional and Boston households

ACCORDING TO THE 1990 CENSUS, 83% OF HOUSEHOLDS IN THE REGION AND 62% OF BOSTON HOUSEHOLDS HAD AT LEAST ONE AUTOMOBILE.

Car ownership in Boston, 1970–1990



Source: U.S. Census, 1990

Car ownership by neighborhood, 1990

Source: U.S. Census, 1990

What does this mean?

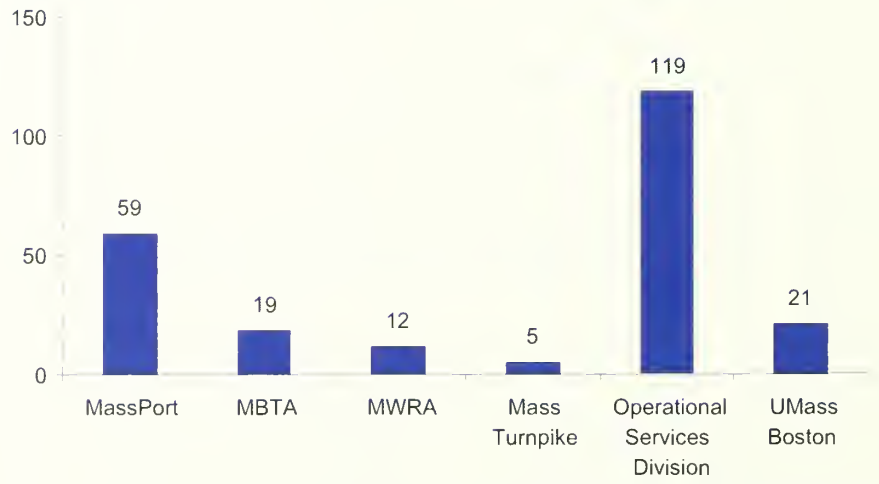
Increased automobile ownership can mean increases in suburban sprawl and decreases in ridership of trains and buses. A greater number of cars on the road may also indicate that public transportation is not serving the needs of the population as well as it should and that commuters must drive to get to work. As more households acquire cars, concerns about parking, air quality, and traffic also increase.

At the time of the 1970 Census, 45% of Boston's households owned at least one vehicle. By 1980, this percentage had increased to 57%. A 1985 household survey conducted by the Boston Redevelopment Authority showed a further increase, to 61%. By the 1990 Census, the percentage had risen to 62%. The rising percentage of households owning automobiles in Boston is attributable to factors such as more jobs in suburban areas that are not well served by public transportation and rising incomes. Not only is the number of households with automobiles increasing, the number of cars per household is increasing as well. According to the 1990 census, 83% of the households in Metro-Boston had at least one automobile, 45% had two automobiles, and 12% had three or more automobiles. These percentages are expected to have grown significantly during the 1990s.

Number of public transportation buses and state fleets using alternative fuel

235 VEHICLES IN THE STATE'S FLEET ARE POWERED BY CLEAN ALTERNATIVE FUELS. OF THESE, 19 ARE OWNED BY THE MBTA AND REPRESENT 1.8% OF THE TOTAL NUMBER OF MBTA BUSES (1,018 TOTAL). AS A RESULT OF THE NEW CONSENT ORDER, 358 MORE CLEAN-FUEL BUSES WILL BE PURCHASED BY THE MBTA

Number of state fleet automobiles using alternate fuels, 1998



Source: Boston MPO Transportation Plan 2000-2025: Existing Conditions, Metropolitan Area Planning Council

What does this mean?

Only 19 of the 1,018 public transport buses operated by the MBTA run on alternative fuels, despite the documented negative impact of diesel fuel on air quality.

The Energy Policy Act adopted by Congress in 1992 outlines a program for low-emission vehicles that use alternative fuels which, besides decreasing dependency on oil, would also help to reduce pollution. The Act sets out guidelines for the acquisition of low-emission vehicles for federal and state fleets.

The *Boston MPO Transportation Plan 2000-2025: Existing Conditions* report identifies 235 vehicles in the Commonwealth's fleet that run on alternative fuels, with the Operational Services Division at 119, the Mass Port Authority at 59 vehicles, UMASS Boston at 21 vehicles, the Massachusetts Bay Transportation Authority at 19 vehicles, the Massachusetts Water Resources Authority at 12 vehicles, and the Massachusetts Turnpike Authority at 5 vehicles. In addition, the Massachusetts Low-Emission Vehicle Program will require 10% of all vehicles available for sale in the state to meet the Zero Emission Standards by the year 2004.

The MBTA recently announced plans to purchase 100 compressed natural gas vehicles. Also, as part of $3 billion in environmental mitigation for the Big Dig, 358 clean-fuel buses have been ordered to be purchased by 2004, according to a consent decree signed by the state's Executive Office of Transportation and the Executive Office of Environmental Affairs. In addition, all older MBTA buses must be retrofitted with emissions controls by the end of 2000.

(See also Environment section)

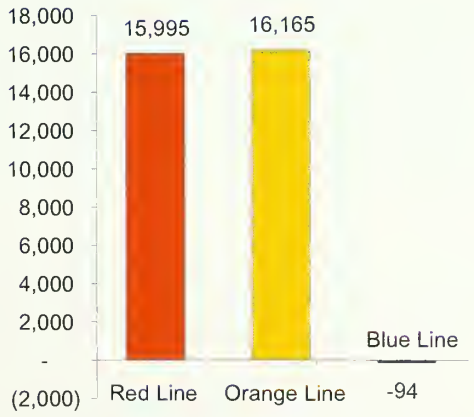
10.4 Options That Enhance Health and Community Life

A sustainable transportation system gives people choices as to where to go and how and when to get there. In a city as dense as Boston, people should be able to get to work and run errands without the use of an automobile. This means that the transportation system needs to accommodate pedestrians, bicyclists, and automobiles alike. It also means that the public transit system needs to better link populations with employment centers and public services. The Urban Ring, currently being planned, will help make those connections a reality.

Subway and commuter rail ridership

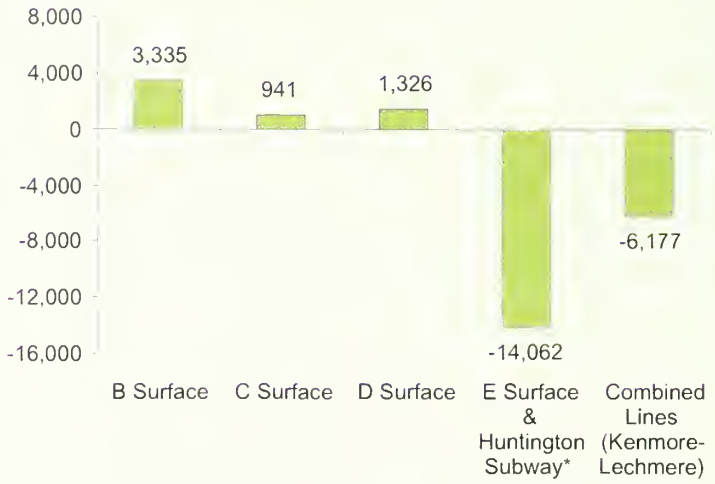
BOSTON'S SUBWAY/TRANSIT RIDERSHIP HAS INCREASED ONLY SLIGHTLY OVER THE LAST 10 TO 15 YEARS. THE BLUE LINE LOST RIDERS. COMMUTER RAIL DATA NOT AVAILABLE AT THIS TIME.

Change in rapid transit ridership (Red, Orange, and Blue lines), 1989–1997



Source: Massachusetts Bay Transportation Authority

Change in light rail ridership (Green line), 1989–1997



*see text below for explanation

Source: Massachusetts Bay Transportation Authority

What does this mean?

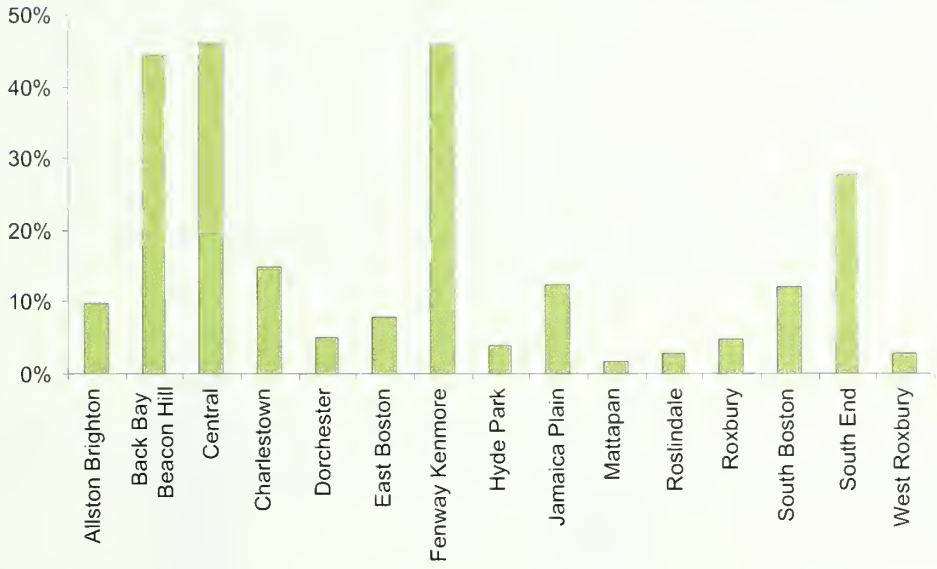
Increased transit ridership is an indicator of the effectiveness and attractiveness of the public transportation system. If public transit is convenient, safe, timely, affordable, and serves population and employment centers, people will use it. Increases in passenger counts suggest that this is happening, while declining passenger counts indicate that the transit system is not serving the population well. When the costs of roadway construction, commuting time, and the resulting pollution and health impacts are taken into account, a good rapid transit system is less expensive and contributes more to the health and livability of a community than other forms of transportation. It also contributes to economic vitality at major transit nodes. Water transit is also both economically and environmentally efficient.

Ridership increased by 8.5% overall on MBTA's rapid transit lines between 1989 and 1997. Ridership on the Blue line remained essentially constant over this period, while ridership on the Red and Orange lines increased by 8.5% and 11.9%, respectively. Ridership on the light rail or Green line was affected by the closing of the E Branch between Heath Street station and Forest Hills in 1989, which also affected the number of passengers on the combined subway line between Kenmore and Lechmere stations. Ridership on the other three surface lines of the Green line was up between 7.4 %and 14.5% between 1985 and 1997.

Number of people who bike/walk to work by neighborhood

IN 1990, OVER 40% OF THE PEOPLE LIVING NEAR DOWNTOWN BOSTON WALKED OR BIKED TO WORK.

Number of people who bike/walk to work by neighborhood, 1990



Source: U S Census, 1990

What does this mean?

The number of people walking and biking to work has myriad implications. Sneaker/wingtip power is the most environmentally friendly mode of transportation and often the most efficient in a well-designed urban environment. Walking and biking enhance civic health and creates opportunities for chance encounters with neighbors, solidifying relationships and thereby contributing to the safety of a neighborhood. When a large percentage of people walk to work, there are fewer automobiles and buses on the street contributing to congestion and poor air quality. Most importantly, when a large percentage of people choose the option of walking or biking to work, it generally indicates a well-planned, safe, and sustainable urban environment. An urban environment designed in this manner cuts down on suburban sprawl, open space destruction and air pollution, and can better foster economic and racial diversity within neighborhoods by supplying a variety of housing types in high density clusters within walking distance of jobs, for people of of various economic levels and for people with special needs.

In Back Bay/Beacon Hill, Central Boston, and areas such as the Waterfront, West End, North End, and the South End, over 40% of residents walk to work. On the other hand, fewer than 5% of the workers in Roxbury, Dorchester, Mattapan, Roslindale, West Roxbury and Hyde Park were able to walk to work.

Number of miles of bike paths in Boston

THERE ARE THREE MAJOR BICYCLE PATHS IN BOSTON — THE ESPLANADE, THE JAMAICAWAY AND THE SOUTHWEST CORRIDOR.

MILEAGE DATA NOT AVAILABLE AT THIS TIME.

What does this mean?

Bicycle paths are an excellent addition to a city's transportation network. The number of people commuting to work on bicycles is limited because riding is often unsafe, or difficult for those required to wear business attire. Increasingly, employers are providing locker rooms for employees who chose to commute via bike. In addition to commuting to and from work, people use bicycle paths when running errands, going to school, visiting friends and family, and for recreation. Bicycling is an excellent form of exercise.

The bicycle paths in Boston are mostly located in open space along the Esplanade, Jamaica Way, and Southwest Corridor. Although these areas make for a pleasant ride, destinations are somewhat limited, and many bikers are forced to ride with traffic on Boston's streets. The City of Boston's Department of Transportation is planning more miles of bicycle paths for the future.

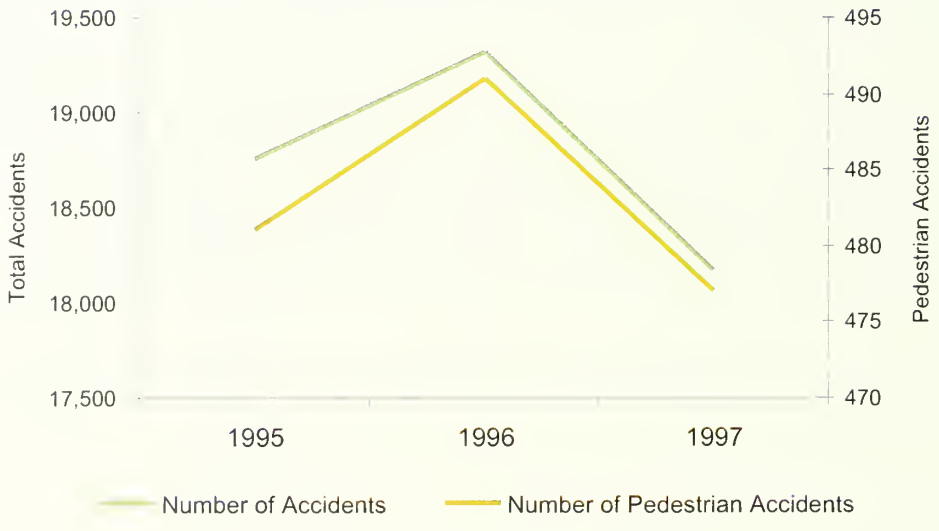
10.5 Safe, Reliable and Comfortable System

Each mode of transportation in a sustainable city's transportation system must be safe. Users of the transportation system need to feel comfortable about their personal safety on trains or buses. In addition, the transportation system should be reliable and should allow people to reach their destination in a timely fashion.

Pedestrian and motor vehicle accidents in Boston

IN 1997, PEDESTRIAN ACCIDENTS IN BOSTON WERE DOWN 2.9% AND ALL MOTOR VEHICLE ACCIDENTS WERE DOWN 6% FROM 1996 FIGURES.

Motor vehicle and pedestrian accidents, 1995–1997



Source: Boston Police Department

What does this mean?

In Boston, where so many people walk to work and to shop, pedestrian safety is of great concern. The city is fortunate to have such a generally pedestrian-friendly design, with wide sidewalks and

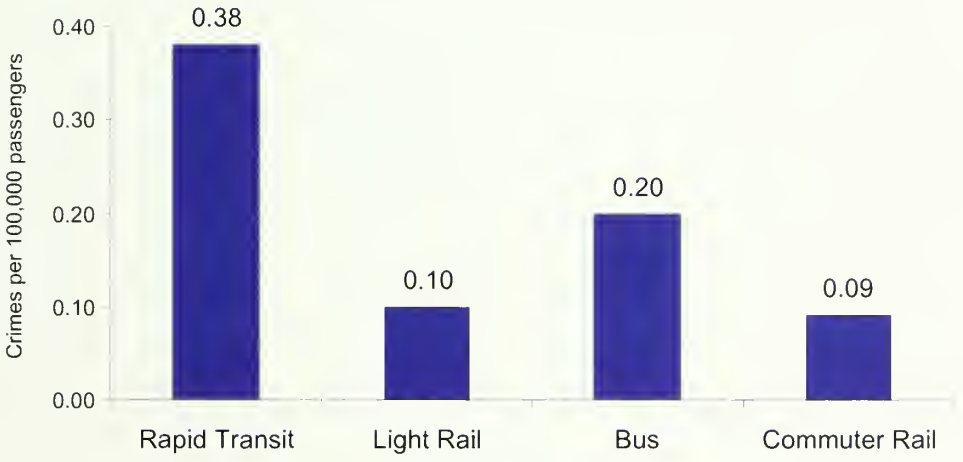
narrow streets in many residential areas. However, increased traffic congestion and construction activity, particularly in Downtown Boston have negatively affected the pedestrian experience. Proactive measures are being taken by the Boston Transportation Department to "calm" traffic, particularly in residential areas. In Boston, pedestrian accidents decreased almost 6.5% in 1997, with five pedestrian fatalities — down from 20 just two years earlier. Statewide, there were 81 pedestrian fatalities in 1997, a very slight decline from 84 in 1995.

Automobile accidents are down as well. In Boston, the number of automobile accidents declined 6% percent between 1996 and 1997. Statewide, the drop was only 4.2%.

Actual crime versus customer perception of crime on the MBTA

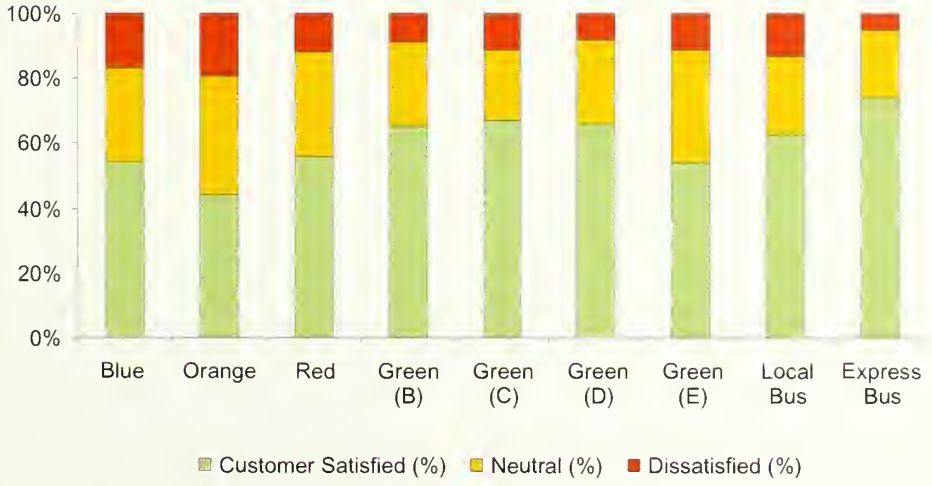
NEARLY 44% OF BOSTON RESIDENTS FEEL SAFE ON THE T.

Actual incidence of crime on the MBTA, 1996



Source: Massachusetts Bay Transportation Authority

Customer perception of crime, 1996



Source: Massachusetts Bay Transportation Authority

What does this mean?

The perception of a public transportation system is almost as important as the reality. If people feel threatened on a train, they will not ride it, whether the threat is real or not. The MBTA conducted a survey in 1996 to gauge customers' perception of the safety of the public transportation system. The survey found that perceptions of being safe from crime varied by type of transportation — rapid transit, light rail, or bus.

Slightly more than half of those surveyed reported that they were satisfied with the safety level on three of the system's rapid transit lines (Red, Orange, and Blue); about 16% of the respondents were dissatisfied. Over 60% of riders reported being satisfied with the safety of the Green line, while less than 10% expressed dissatisfaction. At over 65%, buses had the highest satisfaction rating. Less than 8% were dissatisfied with bus safety.

Actual crime figures from 1996 largely support these perceptions. The rapid transit lines are the least safe, with 0.38 reported crimes per 100,000 passengers. The Green line crime rate is substantially lower, at 0.10 crimes per 100,000 passengers. Though crime was more prevalent on buses (at 0.20 crimes per 100,000 passengers) than on the Green line, buses had a higher safety satisfaction rating. Perceptions of the commuter rail were not included in the 1996 survey, but this mode of transportation had the lowest crime rate of all modes of public transportation, at 0.09 crimes per 100,000 passengers. Recent incidents on the MBTA, however, point to some safety concerns, and the crime rate for 2000 showed an increase over 1999 rates.

Appendix

The Process of Indicator Development

In 1996, then City of Boston Environmental Services Chief Catherine Douglas Stone proposed to then Director of Sustainable Boston Geeta Pradhan that Boston undertake a project to develop indicators of sustainability. This was based in part on a recent conversation Ms. Stone had had with Vice President Al Gore, whose office was coordinating the President's Council on Sustainable Development. Ms. Pradhan solicited the partnership of Charlotte Kahn, Director of the Boston Community Building Network at the Boston Foundation, because of its history in working with large groups and in developing new data resources.

The project would engage the community in creating ways to track and measure progress on a range of indicators. Based on information about Boston and its neighborhoods, the indicators would monitor progress toward sustainability by measuring natural assets, economic well-being and human development. It would also link to the National Neighborhood Indicators Project at the Urban Institute in Washington DC, in which the Boston Community Building Network was participating, along with initiatives in six other cities.

The Boston Indicators Project began in early 1997. From the beginning, it acknowledged Boston's strong social and intellectual capital. It developed an open approach toward participation, soliciting the ideas and knowledge of practitioners, academics, policy makers and leaders across sectors. The process evolved organically, incorporating opportunities and learning from exemplary projects and practice.

Since then, the project has encompassed five distinct stages:

1. **Conceptualizing a framework for progress**
2. **Identifying indicators and measures**
3. **Gathering and analyzing data and report preparation**
4. **Refining and incorporating input and producing a final report for dissemination**
5. **Promoting change through informed civic action**

1. Conceptualizing a framework

- Convening practitioners across sectors
- Building on existing work and best practices
- Random assignment to small groups
- A focus on shared values and hopes as residents and workers
- Adoption of an asset-oriented framework

A meeting at the Boston Foundation on January 23, 1997 included about a dozen people representing organizations and agencies engaged in trying to measure complex change in urban communities: the Codman Square Health Center; the Dudley Street Neighborhood Initiative (DSNI); the Urban Edge Community Development Corporation; and the Neighborhood of Affordable Housing (NOAH). Also participating were analysts from the Boston Redevelopment Authority, City development agencies and environmental organizations such as Second Nature, Inc. Participants discussed the need for a clear vision for the project and ways it could be used to further their goals. Reviewing traditional indicators in use to assess change in urban communities, they quickly acknowledged the need for a more multidimensional approach and the importance of building on local efforts.

Other agencies and groups engaged in new approaches to measurement were invited to subsequent meetings: the Boston Police Department's researchers presented the results of their Public Safety Survey, reinforcing the link between public safety rates and social, economic and quality-of-life issues in Boston. These discussions were enriched by the involvement of additional disciplines, including researchers from the Boston Public School Department and staff from Boston's Community Centers and environmental organizations such as Boston

Natural Areas Fund and Alternatives for Community and Environment (ACE). Participants emphasized the value of working across sectors.

By late spring, the group had developed a broad framework for the project, including a vision, goals and a process for developing indicator categories. By then, the number of participants had grown to about 75. Staff from the regional offices of the federal Environmental Protection Agency (EPA) and the Department of Housing and Urban Development (HUD) had joined in, as well as representatives of a number of community-based organizations. Participants were asked to leave their expertise aside at first and were randomly assigned to small groups to consider the question of shared values and priorities as residents. Out of these shared values and concerns emerged a list of potential indicator categories.

2. Identification of indicators and measures

- Expansion of the group to 150
- Development of visions and goals in ten indicator categories
- Formation of a steering group to guide the process
- Subcommittees draw on sector expertise; small groups explore links across sectors
- Refinement/reduction of proposed indicators and measures

The process of identifying indicator categories and measures took about six months, and involved more than 150 people. General discussions in large-group settings resulted in goals and a vision statement for each of the ten proposed indicator categories, followed by small-group discussions across sectors to explore linkages. Subcommittees drew on participants' particular expertise; small-group sessions explored links across sectors; and then large-group discussions refined the work, with comments on the more technical aspects of data use and availability.

The process of developing indicators in each category continued through the summer of 1997, beginning with sessions to identify and refine specific indicators in the proposed areas of Economy/Jobs, Civic Health, and the Environment, and later, Public Safety and Public Health. Participants talked about what they valued and/or wished to change and debated the merits and demerits of specific indicators and measures. Several interns from the Kennedy School helped to staff the group sessions and to capture the results. In the course of these conversations, participants identified criteria: selected indicators and measures would have to be relevant, meaningful and understandable to the Boston community, and create the momentum for constructive change.

With the body of work and number of participants growing, a steering group was set up to develop structures to guide the work. People volunteered to be on sub-committees and delved into conversations outside the regular meeting process to engage others, and to begin to identify data sources. A June meeting involved a review of indicators previously discussed and proposed indicators and measures for the Transportation, Housing, and Arts/ Culture/Leisure categories, followed by Education and Technology/Communications/Media. In October, 1997, meeting every week, participants refined and sharpened the indicators and measures in view of the criteria they had identified.

The Project also invited similar projects to share their lessons. The City of Boston's Office of Budget Management presented their "Improving Management Project," aimed at encouraging City departments to move from measuring inputs such as the number of miles of roads cleaned, to measuring outcomes — such as the number of miles of clean streets. The Boston Public Health Commission presented the "Health of Boston," a status report on health conditions in Boston's neighborhoods. The Boston School Department presented efforts to measure school reform and student achievement. The Boston Foundation's Community Building Network presented an approach to community change based on building on community assets such as social and family networks to strengthen a community's

problem-solving capacity — in contrast to the traditional approach of seeking first to reduce deficits such school drop-out rates. Indicators Project participants decided to adopt an "asset-based" approach as the best way to promote constructive change. Participants decided that each of the indicators would be expressed as a positive goal, with measures highlighting progress or the need to augment efforts.

3. Draft report preparation

- Narrowing the number of proposed indicators
- Research to identify data sources
- Gathering and analyzing data

By early 1998, more than 150 preliminary indicators had been identified, and more than 500 measures proposed. The focus then turned to narrowing the number of proposed indicators and measures and to identifying data to support them. The process of gathering data proved to be difficult and time consuming. Some potential data providers were concerned that data could be misused; others raised questions about data reliability, consistency, and validity, as well as about issues of confidentiality. This process forced the tightening of indicators, removing duplication and focusing on measures ideally related to more than one issue. Because there was often no existing source of baseline data for Boston, the decision was made to provide an historic context and baseline information in this first report, with future reports becoming more streamlined.

In late 1997 and early 1998, subcommittee presentations were again followed by large-group dialogue. The Massachusetts Technology Collaborative was invited to present its "Massachusetts Innovation Index," a set of 33 indicators, the result of a similar process. Encouraged by their success, the Boston Indicators Project made the decision to identify six to ten core indicators in each category to "tell the story of Boston."

To ensure relevance and consistency across the different categories, the group sought to identify indicators that "defined, measured and monitored those things that strengthen the core health and well being of communities." This concept was combined with a challenge posed by James Howell, former Chief Economist at the Bank of Boston, at a Boston 400 Forum, "Linking People, Opportunity and Place: Economic Vitality for Boston's Neighborhoods." He had stated that, "Boston is poised for success in the global economy of the 21st century; our challenge is to push this prosperity into the neighborhoods of Boston."

To understand the relationship of the global and regional economies on local issues, participants decided to look at three critical levels: the neighborhood; citywide; and metropolitan levels. They also invited international and national indicator experts Alan Atkisson and Maureen Hart to present and to reflect on Boston's approach to indicators development. In the spring of 1998, the Boston Indicators Project presented its "draft" neighborhood and citywide core indicators to members of the National Neighborhood Indicators Partnership (NNIP), which was holding a day-long workshop in Boston with representatives from twelve cities.

The project completed the bulk of initial data gathering and analysis by the fall of 1998, and planned for release of a draft report for review in the spring of 1999.

4. Dissemination and comment

- Release of a draft for review and comment
- Major event to solicit feedback and build a constituency
- Building capacity to use data

On June 3, 1999, the draft Boston Indicators of Progress, Change, and Sustainability report was released at a Boston Citizen Seminar hosted by Boston College. The event, attended by over 250 people from across Boston's neighborhoods and sectors, included a keynote address by Mayor Thomas M. Menino, a video by WCVB-TV 5 about Boston's progress following the first Boston Citizen Seminars in the 1950s, a panel of Boston's civic leaders, and a presentation on the indicators. Participants also engaged in facilitated table conversations, identifying the top

three priorities for Boston as education, collaboration and equity.

Subsequently, more than 700 copies of the draft report were sent out to senior government officials, state legislators and interested organizations and individuals for review and comment. Comments and suggestions received at the event and from individuals, organizations and public agencies were incorporated. In addition, the draft report was presented at the request of several local and regional groups, including the regional office of the Environmental Protection Agency. It was also presented at international conferences on community building and sustainable development issues in San Juan, Puerto Rico, Seoul, Korea, Lisbon, Portugal, and in Vienna, Austria.

The draft document contained a blank Cultural Life section labeled "Under Construction." After release of the draft, a number of special sessions were held to focus on indicators and measures in this area. This process also benefited from participation in Arts and Culture Indicators work undertaken by the Urban Institute.

A conference, "Using Data to Drive Community Change" was held in February, 2000, at Northeastern University, attracting 150 community-based organizations for skill-building workshops and the sharing of recent work and best practices. It was coordinated by the Boston Foundation's Community Building Network and Northeastern University in partnership with the Metropolitan Area Planning Council, the United Way of Massachusetts Bay, Action for Boston Community Development, UMass/Boston, Northeastern University and the City of Boston's Data Roundtable. Several community-based organizations, particularly the Codman Square Health Center and the Allston-Brighton CDC, began to test, tailor and use the indicator categories and measures at the neighborhood level.

A number of groups, including the Boston Redevelopment Authority, Action for Boston Community Development, the United Way of Massachusetts Bay, the Harvard School of Public Health, the Boston Foundation and the Metropolitan Area Planning Council met at the invitation of staff from the Center for Survey Research at the University of Massachusetts in Boston. Facilitated by the Boston Foundation, the group worked to design and collaboratively fund an Annual Boston Survey designed to produce qualitative data to support measures in areas in which consistent data is not generally available. The first survey was conducted in the summer of 2000 in the metro region, citywide, and in four Boston neighborhoods.

5. Using the indicators to promote civic dialogue and action

- Development of a collaborative survey to support qualitative measures
- Release of the report at a Boston Citizen Seminar
- Development of a process to create a civic agenda informed by the indicators

The 2000 report, *The Wisdom of Our Choices*, is being released at a Boston Citizen Seminar sponsored by Boston College with the Boston Foundation, the City of Boston, FleetBoston Financial and the Metropolitan Area Planning Council. As soon as is feasible, the indicators will be made available on line to ensure their general availability and use. It is hoped that through active engagement with the indicators and measures, they will be honed and narrowed further.

Boston is now seen as doing breakthrough work in developing neighborhood indicators of community well being within a citywide and metropolitan context. Local groups and academic institutions have begun to actively use the indicators to guide and evaluate their work. This new knowledge has enriched the methodology in Boston for assessing, tracking and promoting change.

The Boston Indicators Project has exceeded its early goals. Project participants have begun incorporating the indicators in their own work at the community and institutional levels, and have developed relationships across sectors. Efforts are now underway to identify civic and community leaders who will work together over the next two years to generate and advance civic agenda; using the indicators as a point of departure.

List of Participants

Thank you to the many people who participated in developing the framework for this report, who refined the indicators and measures at numerous working sessions, who contributed data and ideas, who reviewed and commented on draft materials, and who helped to organize and facilitate the release and review of the draft report. A complete list follows.

Kathy Abbot, Island Alliance • Lois Adams, Urban Environmental Initiative U.S. Environmental Protection Agency (EPA) Region 1 • Tricia Adams, Boston Community Building Network, Boston Foundation • Fauzia Ahmed • Thomas Ahern, Boston Redevelopment Authority • Scott Allen, The Boston Globe • Neil Alper, Northeastern University • Alan Atkisson, Redefining Progress • John Avault, Boston Redevelopment Authority • Steve Backman, Citywide Parents Council • Kenneth Bailey, Third Sector Solutions • Enrique Balaguer, formerly of the Office of Budget Management, City of Boston • Indira Balkissoon, formerly of the Urban Environmental Initiative, U.S. Environmental Protection Agency (EPA) Region 1 • Jody Bangs, Boston Public Health Commission • Rebecca Barnes FAIA, Boston Society of Architects • Sam Bass Warner, Jr., Massachusetts Institute of Technology • Gary Battison, Department of Neighborhood Development, City of Boston • Elaine Beahia, Boston Municipal Research Bureau • Beate Becker, Massachusetts Cultural Council • John Berg, Department of Neighborhood Development, City of Boston • Angel Bermudez, Boston Foundation • Marjorie Bernadeau, Boston Police Department • Brad Blodgett, Natural Heritage Program • Margaret Blood, Strategies for Children • Anne Bonner, Greater Boston Chamber of Commerce • Larry Braman, Department of Neighborhood Development, City of Boston • Steven Brittan, formerly of the Department of Neighborhood Development, City of Boston • Don Buckholtz, United Way of Massachusetts Bay • John Bullard, University of Massachusetts, former member of Presidents Council on Sustainable Development • Sandra Lopez Burke, Boston 2000, Inc. • Valerie Burns, Boston Natural Areas Fund • Alan Butters, Boston Public Schools, City of Boston • Kenneth G. Caldwell, Boston Public Schools, City of Boston • Jim Campen, University of Massachusetts - Boston • Patricia Canavan, former Housing Advisor Mayor's Office, City of Boston • Kate Canfield, Canfield Design • Douglas Carnahan, formerly of the Metropolitan Area Planning Council • Lou Casagrande, Children's Museum • Susan Cascino, Public Works Department, City of Boston • Eli Castro, MIS, Department of Neighborhood Development, City of Boston • Stacey Chacker, Neighborhood of Affordable Housing • Rick Chandler, formerly of the Boston Police Department • Marilyn Anderson Chase, Community Investment, United Way of Massachusetts Bay • Lawrence Cheng, Center for Community Economic Development, University of Massachusetts, Boston • Mew Chiu, Read Boston Program, City of Boston • Lauri Ciardi, Boston Parks & Recreation Department • Scott Cleveland, U.S. Department of Housing and Urban Development (HUD) • Anne-Marie Codur, University of the Middle East Project • Ann Coles, Boston Higher Education Partnership • Barry Commette, Department of Neighborhood Development, City of Boston • Robert Consalvo, Boston Redevelopment Authority • Jayne Copley, • Anthony Cortese, Second Nature, Inc. • Bill Costa, Boston Redevelopment Authority • Joseph Coughlin, Center for Transportation Studies, Massachusetts Institute of Technology • George Craddock, South Boston Health Center • Tanya Craig, The Partnership Inc. • Jennifer Davis, Boston 2:00-6:00 Initiative, City of Boston • Andrea d'Amato, Environmental Services Cabinet & Boston Transportation Department, City of Boston • Ralph Dart, Office of Cultural Affairs, City of Boston • Curtis Davis, John Hancock Real Estate Investment Group • Tim Davis, Fenway Community Development Corporation • Doug DeNatale, New England Foundation for the Arts • Tom DeNormandie, Air Quality Control, Massachusetts

Department of Environmental Protection • Roger Dewey, Christian Economic Coalition • Robert Doherty, Boston School Committee • Maryellen Donahue, Office of Research, Assessment, and Evaluation, Boston Public Schools • John Donavan, Boston Election Department, City of Boston • Dan Dooley, Boston Public Health Commission • Allison dos Santos, former student of the Urban & Environment Policy Program, Tufts University • Cathy Douglas Stone, Mayor's Office formerly of the Environmental Services Cabinet, City of Boston • Dharmena Downey, Neighborhood of Affordable Housing • Lorraine Downey, Massachusetts Water Resource Authority • Elizabeth Doyle, Department of Neighborhood Development, City of Boston • Chan Du, formerly of the Metropolitan Area Planning Council • Sarah Dunford, Greater Boston Chamber of Commerce • Brent Durbin, student, John F. Kennedy School of Government, Harvard University • Veronica Eady, formerly of Alternatives for Community & Environment • Westy Egmont, International Institute of Boston • Bruce Ehrlich, Department of Neighborhood Development, City of Boston • Melissa Emry Arras, John F. Kennedy School of Government, Harvard University • Charles Euchner, formerly of Boston 400, Boston Redevelopment Authority • Mark Fahey, Department of Neighborhood Development, City of Boston • Alison Felix, Boston Transportation Department, City of Boston • Mark Ferri, Business Development & Strategic Alliances, NStar • Rosemary Ferri, Public Health Consultant • Sherry Flashman, formerly of the Department of Neighborhood Development, City of Boston • Christy Foote Smith, Massachusetts Office of Environmental Affairs • Tom Formicola, Ford Hall Forum • Evelyn Friedman, Nuestra Communidad Development Corporation • Steve Gag, Technology Advisor Mayor's Office, City of Boston • Barry Gaither, National Center of African American Artists • Dr. Ann Galligan, Northeastern University • Dennis Galvan, Office of Neighborhood Services, City of Boston • Mike Galvin, Metropolitan District Commission • Luis Garcia, Office of Research and Analysis, Boston Police Department • Richard Garver, Boston Redevelopment Authority • Aldo Ghirin, Boston Parks & Recreation Department • Josh Gibson, student, John F. Kennedy School of Government, Harvard University • Joan Gibson, U.S. Census Bureau, Boston Regional Office • Phil Giffee, Neighborhood of Affordable Housing • Kate Gillooly, Sustainable Development Consultant • Robert Gittens, Department of Youth Services • Bryan Glasscock, Environment Department, City of Boston • Rolf Goetze, Boston Redevelopment Authority • James Goldstein, Tellus Institute • Heather Gonzalez, Jobs with Justice • Diane Gordon, Neighborhood Reinvestment Corporation • Terry Green, John Snow Institute Center for Environmental Health • Roberta Griffiths, Northeastern University • Nancy Grilk, Office of Business Development, City of Boston • Deborah Griswold, U.S. Department of Housing and Urban Development (HUD) • Joann Gu, Office of Research & Evaluation, Boston Police Department • Vineet Gupta, Boston Transportation Department, City of Boston • Mossik Hacobian, Urban Edge Community Development Corporation • Donna Haig Friedman, McCormack Institute, University of Massachusetts, Boston • Jared Hardner, Industrial Economics, Inc. • Maureen Hart, Hart Environmental Data • Susan Hartnett, Boston Center for the Arts • Bennet Heart, Conservation Law Foundation • Curtis Henderson, Boston Neighborhood Network (BNN-TV) • Katrina Henderson, Watershed Institute, Boston College • Joaquin Herranz, Urban Institute • Anne Hershfang, Walk Boston • Toni Hicks, former intern, Conservation Law Foundation • Barbara Hindley, Boston Foundation • Shaye Hokinson, Industrial Economics, Inc. • Cheng Imm Tan, Office of New Bostonians, City of Boston • Mark Isenburg, Action for Community and Development • Deborah Jackson, Boston Foundation • Maria Jackson, Urban Institute • Para Jayasinghe, Transportation Department, City of Boston • Kenneth Johnson, Green Mountain Institute • Christine Johnson-Staub, Associated Day Care Services, Project EQUIP • Harlan Jones, Freedom House • David Kaeli, Department of Electrical & Computer Engineering, Northeastern University • Charlotte Kahn, Boston Community Building Network, Boston Foundation • Diane Kaneb• Esther Kaplan, Office of Cultural Affairs, City of Boston • Sarah Kass, City on a Hill Charter School • Patrice Keegan, Civic Health Institute, Codman Square Health Center • Robert Keller, formally

with Dudley Street Neighborhood Initiative • Bruce Kennedy, Harvard School of Public Health • Carl Keochlin, Fenway Community Development Corporation • Peter Kiang, University of Massachusetts, Boston • Satoko Kishi Hesp, Boston Foundation • Elizabeth Kline, Global Development & Environment Institute, Tufts University • Jim Klocke, Greater Boston Chamber of Commerce • Mary Knasas, Department of Neighborhood Development, City of Boston • Robert Krim, Boston History Collaborative • Steven Landau, formerly of the Metropolitan Area Planning Council • Ted Landsmark, Boston Architectural Center • Claire Lane, Assessing Department, City of Boston • Al Lau, Boston Public Schools, City of Boston • Ginger Lawrence, North East States for Coordinated Air Use Movement (NESCAUM) • Tracey Lawrence, Metropolitan Area Planning Council • Lynda Lee, NStar • Joe Levinger, Boston 2:00 - 6:00 Initiative, City of Boston • Geoffrey Lewis, Boston Redevelopment Authority • Vivien Li, Boston Harbor Association • Douglas Ling, Asian Community Development Corporation • Ellen Lipsey, Landmarks Commission, City of Boston • Anne Livingston, Riverways Program, Massachusetts Department of Fisheries & Wildlife • Russ Lopez, formerly of the Environmental Diversity Forum • Charles Lord, Watershed Institute, Boston College • Diane MacDonald, formerly of the Boston Office of Management and Budget • Che Madyun, The Strand Theatre • Steve Maloff, formally of Boston Police Department • Janet Maniero, Boston Water and Server Commission • Joanne Massaro, Department of Neighborhood Development, City of Boston • Jan Mastrocola, Office of Cultural Affairs, City of Boston • Carole Mathieson, Basic City Services Cabinet, City of Boston • Marnie Matz, former intern Urban Environmental Initiative U.S. Environmental Protection Agency (EPA) Region 1 • Katie Mazer, U.S. Environmental Protection Agency (EPA) Region 1 • Paul McCaffrey, Boston Parks & Recreation Department, City of Boston • Mac McCabe, Institute for Civil Society • Ashley McCumber, formally of Codman Square Health Center • Charles McDermott, Massachusetts Cultural Council • Pete McDonald, Boston Redevelopment Authority • Ceasar McDowell, Center for Reflective Community Practice, Massachusetts Institute of Technology • William McGonigle, Boston Housing Authority • Jennifer McGraw, project intern and former student at the John F. Kennedy School of Government, Harvard University • Sharon McGregor, Massachusetts Office of Environmental Affairs • Ann McQueen, Boston Foundation • Neal Mello, Massachusetts Institute for a New Commonwealth (MassINC.) • Gloria Meneses, Boston Housing Authority • Kirk Meyer, Boston Schoolyard Initiative • Matthew Miller, Architect • Li Ming Liu, Boston Redevelopment Authority • Steve Minicucci, Sajuaro Seminar, John F. Kennedy School of Government, Harvard University• Patrick Moan, Boston Beautiful • Jerry Mogul, Office of Community Partnerships, Health and Human Services Cabinet, City of Boston • Jennifer Montana, formerly of Massachusetts Technology Collaborative • Craig Moore, University of Massachusetts Boston • Holly Morehouse Garriga, Industrial Economics, Inc. • Russell Morris, formerly of the Earth Service Corps, Greater Boston YMCA • David Mulligan, Boston Public Health Commission • John Murphy, Boston Housing Authority • Gloria Cross Mwase, Metropolitan Area Planning Council • Andrea Nagel, formally of Youthbuild USA • Susan Naimark, Boston School Committee, and Development Leadership Network • Martin Nee, U.S. Department of Housing & Urban Development (HUD) • Emily Noah, Industrial Economics, Inc. • Ali Noorani, formerly of the Greater Boston Urban Resources Partnership • Giulia Norton, formerly of the Department of Public Health, City of Boston • Fiona O'Connor, Neighborhood Reinvestment Corporation • Kristen O'Connor, Boston Public Health Commission • Amy Oelgeschlager, Greater Boston Chamber of Commerce • Ngozi Oleru, formerly of the Office of Environmental Health, City of Boston • Carisa Olivo, United Way of Massachusetts Bay • Tamara Olsen, Organization for a New Equality • Cynthia Osborne, project intern and former student at the John F. Kennedy School of Government, Harvard University • Dr. Mary Ostrem, Boston Public Health Commission • Samantha Overton Ponsell, Massachusetts District Commission • Cynthia Parker, Interaction Institute for Social Change • April Pattavina, Northeastern University • Gregory Perkins, Boston

Redevelopment Authority • Kit Perkins, New Ecology Inc. and formerly of the Jamaica Plain Neighborhood Development Corporation • Edward Perlmutter• Glenn Pierce, Center for Academic Computing, Northeastern University • Paula Z. Planthaber, Neighborhood Reinvestment Corporation • Stephanie Pollack, Conservation Law Foundation • Toni Pollak, Environment Department, City of Boston • Jennifer Powers, Boston Private Industry Council • Geeta Pradhan, formerly of Sustainable Boston, City of Boston • Swati Prakash, formerly of the Environmental Diversity Forum • Jim Quane, John F. Kennedy School of Government, Harvard University • David Queely, Massachusetts Audubon Society • Gordana Rabrenovic, Department of Sociology, Northeastern University • Andrea Rex, Massachusetts Water Resources Authority • Elise Riche, Urban Institute • Evelyn Risenberg, Community Centers, City of B oston • Cindy Rizzo, Boston Foundation• Edward Robbins, Harvard Graduate School of Design • Phillip Rodbell, formerly of the Massachusetts Department of Environmental Management• Osula Rushing, Boston Community Building Network, Boston Foundation • Laura Russell, Women's Educational and Industrial Union • Mary Russell, South Boston Public Health Initiative • Anne Ryan, Health Care Consultant • Chris Ryer, Citizens Planning and Housing Association • Jason Sachs, formerly of Associated Day Care Services • Alan Saiz, Geology Department, Northeastern University • Carol Santoro, Boston Police Department, City of Boston • Bish Sanyal, Department of Urban Studies & Planning, Massachusetts Institute of Technology • Jerry Schubel, New England Aquarium • Eric Schwartz, Boston College • Eswaran Selvarajah, Southend Neighborhood Action Plan (SNAP) • Linda Sevey, Massachusetts College of Art • Allan Shearer, Landscape Architecture, Harvard University • Saundra Shelton, Boston Foundation • Lauri Sherman, Health and Human Services Advisor, Mayor's Office, City of Boston • Lillian Shirley, Boston Public Health Commission • Bill Shutkin, New Ecology, Inc. • Candelaria Silva, ACT Roxbury • Peter Smith, Architects for Social Responsibility • David Soule, Metropolitan Area Planning Council • Donna Spinizola, Public Works Department, City of Boston • Holly St. Clair, Department of Neighborhood Development, City of Boston • Office of Research, Health Assessment and Data Systems, Boston Public Health Commission, • Pablo Suarez • Tom Sullivan, Parks & Recreation Department, City of Boston • Victoria Tamas, Office of Budget Management, City of Boston • Edward Tarallo, Metropolitan Area Planning Council • Stella Tarney, Green Village Company • Michael Taylor, Boston 2000, Inc. • Paul Taylor, Public Works Department, City of Boston • Adalberto Teixeira, Health and Human Services Cabinet, City of Boston • Matt Thall, Local Initiatives Support Collaborative • Andrew Theokas, Department of Neighborhood Development, City of Boston • Eva Thorne, Dorchester Resident • Teresa Titcomb, Office of Business Development, City of Boston • Patrice Todisco, Boston Green Space Alliance • Antonio Torres, formerly of the Boston Department of Urban & Environmental Policy, Tufts University • Kathy Tosselini, Boston Public Schools, City of Boston • Kathleen Traphagen, Mayor's Office of Intergovernmental Affairs, City of Boston • Melinda Treadwell, North East States for Coordination & Air Use Management (NESCAUM) • Tracey Tsugawa, formally of the Asian American Resource Workshop • Bob Van-Meter, Allston/Brighton Community Development Corporation • Dennis Villano, MIS, Boston Foundation • Robert Wadsworth, Boston Foundation • Clara Wainwright, First Night, Inc. • William Walczak, Codman Square Health Center • Donald Walsh, NStar • Carol Ward, Urban Environmental Initiative, US Environmental Protection Agency (EPA) Region 1 • Gregory Wassall, Northeastern University • Greg Watson, formerly of the Dudley Street Neighborhood Initiative • Sarah Weinstein, Massachusetts Department of Environmental Protection • Carter Wilke, formally of Mayor's Office, City of Boston • Margaret Williams, Read Boston, City of Boston • Marti Wilson-Taylor, YWCA• Beow Yeape, Harvard School of Public Health • Jonathan Yeo, Massachusetts Water Resources Authority • Marinell Yoders, Boston 2:00 - 6:00 Initiative, City of Boston

Cultural/Ethnic Group Populations in Boston

Note: Residents and researchers in Boston often wonder what the population figures are for the many cultural/ethnic groups in the city. The question is difficult to answer. The 1990 U.S. Census measured population figures in four different ways: *1) race; 2) ancestry; 3) place of birth for foreign-born residents; and 4), Hispanic origin.* Census data, while providing helpful information in answering this question, has a number of shortcomings. Not all cultural/ethnic groups were measured in all categories, and many cultural/ethnic groups were not counted at all. Also, the Census allowed individuals to respond and be counted in more than one category. In addition, Boston has welcomed large numbers of newcomers since 1990, whose arrival is not reflected in the data. Such new data will not be available until results of the 2000 Census become available at the city level in 2002. We present the data below with an awareness of their limitations in an effort to begin to chart the diversity that makes Boston so culturally rich, and with the expectation that new data will more accurately reflect Boston's cultural/ethnic diversity in the coming years.

Cultural Group	Race	Ancestry	Place of birth of foreign born residents	Hispanic origin
African				
Cape Verdean		6,140	3,906	
Egyptian		306	375	
Ethiopian		465	447	
Ghanian		144	179	
Kenyan			55	
Moroccan			215	
Nigerian		607	639	
Senegalese			35	
South African			219	
American Indian	1,838			
Asian/Pacific Islander				
Burmese			182	
Cambodian	1,052		841	
Chinese(inc. Hong Kong)	16,263		9,748	
Filipino	1,212		741	
Guamanian	210			
Hawaiian	44			
Indian	1,948		967	
Indonesian			167	
Japanese	1,675		1,278	
Korean	1,368		996	
Laotian	396		334	
Malaysian			158	
Pakistani			294	
Samoan	12			

Cultural Group	Race	Ancestry	Place of birth of foreign born residents	Hispanic origin
Taiwanese			726	
Thai	358		418	
Vietnamese	4,812		4,398	
Caribbean/West Indian		26,546		
Antiguan			225	
Bahamian		32	113	
Barbadian		1,805	2,511	
Cuban			1,451	2,483
Dominican (Dom. Republic)			5,731	
Granadian			164	
Haitian		12,438	10,407	
Jamaican		5,869	4,715	
Trinidadian/Tobagonian		1,712	2,823	
Puerto Rican				25,767
Central American				
Belezian		39	120	
Costa Rican			468	
El Salvadoran			2,761	
Guatemalen			2,038	
Honduran			1,699	
Nicaraguan			221	
Panamanian			476	
European				
Albanian		659		
Armenian		1,190		
Austrian		2,013	161	
Belgian		416	71	
Croatian		311		
Czechoslovakian		516	169	
Danish		1,089	22	
Dutch		3,339	290	
English		38,385		
Estonian		132	47	
Finnish		843	38	
French		16,045	538	
German		34,054	998	
Greek		6,007	1,768	
Hungarian		1,802	119	
Irish		128,602	6,497	
Italian		60,178	5,107	
Latvian		845	351	
Lithunanian		5,163	364	

Cultural Group	Race	Ancestry	Place of birth of foreign born residents	Hispanic origin
Norwegian		2,411	71	
Polish		17,009	1,656	
Portuguese		5,108	705	
Romanian		1,033	113	
Russian		13,756	3,811	
Scandinavian		772		
Scottish		9,675		
Slovak		1,118		
Spanish			490	
Swedish		5,373	157	
Swiss		993	224	
Turkish		373	359	
Ukranian		1,780		
Welsh		1,761		
Yugoslavian		343	115	
Middle Eastern				
Afgan			20	
Iranian		623	579	
Iraqi		54	115	
Isreali		384	331	
Jordanian		41	162	
Lebanese		2,817	906	
Palestinian			127	
Syrian		1,018	333	
North American				
Canadian		5,105	3,360	
Mexican			898	2,179
Oceanic				
Australian		151	202	
New Zealander			14	
South American				
Argentinean			267	
Brazilian		1,541	2,172	
Bolivian			213	
Chilean			318	
Columbian			1,790	
Equadorian			288	
Guyanese		267	446	
Peruvian			715	
Uruguanian			40	
Venezuelan			393	

Source: 1990 U.S.Census

Data Resources

Bibliography of Major Reports Referenced

About Your Community: Air Quality: Suffolk, 1998. Chemical Scorecard, Environmental Defense Fund. www.scorecard.org

1999 Annual Report, Boston Police Department. City of Boston, 2000.

1995 Annual Report on Air Quality in New England. U.S. Environmental Protection Agency, Region 1, Ecosystem Assessment Branch, 1996.

1997 Air Quality Report, Commonwealth of Massachusetts. Executive Office of Environmental Affairs, Department of Environmental Protection, Bureau of Waste Protection, Division of Planning and Evaluation.

Boston Adolescents & Young Adults: A Health Profile. Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems, March 1999.

Boston Globe, Selected articles, 1998-2000.

Boston Police Safety Surveys, 1997 and 1999.

Boston's Growth Economy Looks to the Future. Boston Redevelopment Authority, 1998.

Boston's Strong Office Market Update. Boston Redevelopment Authority, 1999.

Boston MPO Transportation Plan 2000-2025: Existing Conditions. Draft for Public Review and Comment. Central Transportation Planning Staff for the Boston Metropolitan Planning Organization (MPO). www.plan2000.org

The Changing Workforce: Immigrants and the New Economy in Massachusetts. Massachusetts Institute for a New Commonwealth Boston (MassINC.), 1999.

How We Live: Civic Initiatives for a Livable New England,. Boston Society of Architects, 2000.

Closing the Gap: Raising Skills to Raise Wages. Massachusetts Institute for a New Commonwealth Boston (MassINC.), 1997.

CommonWealth: Politics, Ideas, and Civic Life in Massachusetts. Massachusetts Institute for a New Commonwealth Boston (MassINC.), 2000.

Commonwealth of Massachusetts: Summary of Water Quality. Massachusetts Department of Environmental Protection, Division of Watershed Management, 1998 Draft.

The Creative Economy Initiative: The Role of the Arts and Culture in New England's Economic Competitiveness. The New England Council, Boston, June, 2000.

1998 Crime Summary Report, Boston Police Department. City of Boston, 1999.

1999 Crime Summary Report, Boston Police Department. City of Boston, 2000.

Cultural Assessment and Planning Report: ARTSMARKET. Office of Cultural Affairs, City of Boston, 2000.

"Everybody's Out There for Youth", Citywide Strategy for Youth Development: making Boston a safe and hopeful place for all youth; Assessment of Resources and Needs, Framework for Action, NBoston's Health and Human Services Cabinet, Office of Community Partnerships, April, 2000.

Facts About Boston's Neighborhoods, 16 Neighborhoods & 69 Neighborhood Statistical Areas: A comprehensive guide to population, income, housing, and job statistics from the Census. Boston Redevelopment Authority, City of Boston, 1995.

Falling Through the Net: Defining the Digital Divide. National Telecommunications and Information Administration, US Department of Commerce, 1998.

Health of Boston 2000. Boston Public Health Commission, Office of Research, Health Assessment, and Data Systems, 2000.

Hidden hunger, fragile futures. A report on child hunger. Project Bread and The Center on Hunger and Poverty, Tufts University, 1998.

The High Cost of Living in Massachusetts: What You Should Know, Civic Education. Massachusetts Institute for a New Commonwealth, (MassINC.).

History of Boston's Economy: Growth and Transition — 1970 to 1998. Boston Redevelopment Authority, 1999.

A Housing Crisis: Competing in the 21st Century, Will Greater Boston lose its competitive advantage as housing costs skyrocket? A Boston Citizen Seminar, Boston College, Metropolitan Affairs Coalition & Metropolitan Area Planning Council, December, Boston, 1999.

Housing Today: Boston's Challenges and Opportunities. City of Boston.

Index of the Massachusetts Innovation Economy. Massachusetts Technology Collaborative, 1997, 1998 and 1999.

MAPC Community Profiles. Metropolitan Area Planning Council, 1998.

Massachusetts Benchmarks: The Quarterly Review of Economic News & Insight. A Publication of the University of Massachusetts in Cooperation with the Federal Reserve Bank of Boston, Winter 1999, Volume Two, Issue 1.

Opportunity Knocks: Training the Commonwealth's Workers for the New Economy. Mellon New England & Massachusetts Institute for a New Commonwealth, March, 2000.

Overworked and Underemployed:Unraveling an Economic Enigma. Barry Bluestone and Stephen Rose, *The American Prospect*, Issue 31, 1997.

A Profile of Housing in Massachusetts: A 1998 Study by the University of Massachusetts. University of Massachusetts, 1998.

The Road Ahead: Emerging Threats to the Massachusetts Economy. Research, Massachusetts Institute for a New Commonwealth Boston (MassINC.), 1998.

School Profiles 1996-97. The School Committee Boston Public School Department, 1998.

The Self-Sufficiency Standard: Where Massachusetts Families Stand. The Massachusetts Family Economic Self-Sufficiency Project, Women's Educational and Industrial Union in collaboration with Wider Opportunities for Women, 2000.

State of African American Professionals in Boston. The Partnership, Inc., 2000.

The State of the Cities 2000: Megaforces Shaping the Future of the Nation's Cities. U.S. Department of Housing and Urban Development, 2000.

The State of Our Environment. Executive Office of Environmental Affairs, Commonwealth of Massachusetts, 2000.

Streetscape Guidelines for Boston's Major Roads. Boston Transportation Department, Boston, 1999, Second Edition.

Who are Boston's Children? Frequently asked questions about Boston's youth. Boston Redevelopment Authority, City of Boston, 1998.

Key Data Resources

Boston Children and Families Database: Provides a clear picture of neighborhood conditions and allows for measurements of community change over time. Contains more that 1,400 data points of community health and well-being. Available in CD-ROM. The Boston Foundation, (617) 723-7415

Boston Globe Online: Provides access to current and previous articles through a key word search function and an archives search (1979-2000). Charge for archives search. www.boston.com

Boston Herald Online: Provides access to daily news and to recent articles through a key word search function. www.bostonherald.com

Boston Online: Boston statistics from public and private sources and links to neighborhood sites and resources. www.boston-online.com

Boston Public Library: Provides access to reference documents and resources, books on all subjects, government documents and databases, and several on-line links. www.bpl.org

Bureau of Economic Analysis (BEA): Provides access to economic data at the national, state and regional levels. www.doc.bea.gov

Bureau of Labor Statistics (BLS): Provides access to labor statistics at the national, state and local levels. www.bls.gov

Center of Regional and Urban Planning (CURP): Based at Northeastern University, CURP has information about Boston area policy and planning issues, organizations, documents and a Greater Boston Resource Kit. www.curp.neu.edu

Chemical Scorecard: Chemical information service from the Environmental Defense Fund, which provides data and action tips on chemical pollution for communities. www.scorecard.org

City of Boston: Links to all City departments, including the Boston Redevelopment Authority and profiles of neighborhood services, department reports and contact information. Boston information and resources can also be found at the Boston City Hall. www.ci.boston.ma.us

Commonwealth of Massachusetts: Provides access to data and to government branches, offices and departments in every city and town in Massachusetts. www.state.ma.us

Division of Employment and Training (DET): Massachusetts Division of Employment and Training provides labor market data for Massachusetts. www.detma.org

EconData.Net: A guide to regional economic activity, with more than 400 links to data sources. www.econdata.net

Massachusetts Electric Atlas: Provides layered maps representing compiled statistical measures from independent organizations. (A Boston Atlas is in progress.) icg.fas.harvard.edu/~maps

Massachusetts Institute for Social and Economic Research (MISER): U.S. Census Bureau data on Massachusetts. www.umass.edu/miser

MassCHIP: An online data resource service by the Massachusetts Department of Public Health. www.state.us/dph.ose/mchphome.html

MassINC. – Massachusetts Institute for a New Commonwealth: Publishes two magazines and many reports to inform and promote policy development in Massachusetts, www.massinc.org (617) 338-8900

Metropolitan Area Planning Council (MAPC): Offers a broad range of demographic and economic information on 101 cities and towns in Eastern Massachusetts. www.mapc.org (617) 451-2770

U.S. Census Bureau: Demographics statistics for every neighborhood and census block, as well as mapping software. Year 2000 Census results for Boston will become available in 2001-2002. www.census.gov

List of Acronyms

ACE: Alternatives for Community and Environment

ATM: automated teller machines

BBJ: Boston Business Journal

BIIS: Boston Immunization Information System

BNN-TV: Boston Neighborhood Network TV

Boston CMSA: Boston Consolidated Metropolitan Statistical Area, as defined by the U.S. Census Bureau (the area surrounding Boston to Worcester, Massachusetts, York, Maine, Nashua, New Hampshire, and parts of Connecticut, with a total population of about 5.6 million people)

Boston PMSA: Boston Primary Metropolitan Statistical Area, as defined by the U.S. Census Bureau (including 129 towns in Eastern Massachusetts and two in New Hampshire, for a total of about 3.2 million people)

BPFSS: Behavioral Risk Factor Surveillance Survey

BPL: Boston Public Library

BPS: Boston Public Schools

CDC: Center for Disease Control

CDC: community development corporation

City of Boston: Boston's municipal government

CMM: Cooperative Metropolitan Ministries

COPD: chronic obstructive pulmonary disease

CTC Net: Community Technology Center Network

DDT: Dichloro-diphenyl-trichloroethane

EMS: Emergency Medical Services

EPA: U.S. Environmental Protection Agency

EQUIP: Boston Education Quality Improvement Project (coordinated by Associated Day Care Services)

ESL: English-as-a-Second Language class or course of study

EZ: Empowerment Zone, HUD designation of area with more than 30% poverty for human development and economic revitalization.

FIRE: Finance, Insurance and Real Estate

GBIO: Greater Boston Interfaith Organization

HMO: health maintenance organization

HOPE VI: HUD program to upgrade the nation's most distressed public housing

HUD: U.S. Department of Housing & Urban Development

ICIC: Initiative for a Competitive Inner City

MA: Massachusetts

MAC: Metropolitan Affairs Coalition

MAPC: Metropolitan Area Planning Council

MassINC.: Massachusetts Institute for a New Commonwealth

MBTA: Massachusetts Bay Transit Authority

MCAS: Massachusetts Comprehensive Assessment System

METCO: Metropolitan Council for Education Opportunity

Metro-Boston: the 101 cities and towns in Eastern Massachusetts included in the Metropolitan Area Planning Council's state-mandated planning area

NIH: National Institutes of Health

PIC: Private Industry Council

USDA: U.S. Department of Agriculture

WEIU: Women's Education and Industrial Union

Credits

Principal Authors
Geeta Pradhan and Charlotte Kahn

Data Conversion, Charts, and Graphs
Geoffrey Lewis, Boston Redevelopment Authority

Research
Tricia Adams, Boston Foundation
Robert Consalvo, Boston Redevelopment Authority
Doug DeNatale, New England Foundation for the Arts
Mary Ellen Donahue, Boston Public Schools
Chan Du, Metropolitan Area Planning Council
Joann Gu, Boston Police Department
Charlotte Kahn, Boston Foundation
Elizabeth Kline, Tufts University
Geoffrey Lewis, Boston Redevelopment Authority
Gloria Cross Mwase, Metropolitan Area Planning Council
Office of Research, Health Assessment and Data Systems, Boston Public Health Commission
Geeta Pradhan, Sustainable Boston
Thomas Quattromani, Metropolitan Area Planning Council
Osula Rushing, Boston Foundation
Alan Saiz, Northeastern University
Holly St. Clair, Department of Neighborhood Development, City of Boston

Maps
Geoffrey Lewis, Boston Redevelopment Authority
Alan Saiz, Northeastern University
Gary Battison, Department of Neighborhood Development, City of Boston
Allan Bishop, Metropolitan Area Planning Council

Photographs
Richard Howard

Graphic Design
Kate Canfield

Copy Editing
Fauzia Ahmad, Satoko Kishi Hesp, Osula Rushing

Draft Report
Ed Perlmutter, Graphic Design, and Jayne Copley, copy editing, Eswaran Selvarajah, Charts and Graphs

Special thanks to Robert Consalvo, Director of Policy Development and Research, Boston Redevelopment Authority, and to Peter Rollins and Nancy Ann Powers of the Office of Corporate/Government Affairs, and the Boston Citizens Seminar, Wallace E. Carroll School of Management, Boston College.

Authors' Note

This report represents our best effort to offer clear, up-to-date information to enable you to develop a multidimensional understanding of conditions and opportunities in Metro-Boston, Boston and its neighborhoods. However, it is a first effort. As such, it has limitations of which we are very aware.

We rely on your engagement with this report and the data and concepts in it as the best way to guarantee its improvement. We welcome your comments, corrections, and suggestions. (Please see next page.)

We are hopeful that this report will mark the beginning of a 30-year commitment in Boston to create sustainable prosperity and a high quality of life for all residents. We are also hopeful that in the course of attempting to achieve that goal, Boston will fulfill its potential to lead the way regionally, nationally and globally.

We would like to thank personally the hundreds of people with whom we have had the privilege of working on this project. We particularly thank Cathy Douglas Stone, Bob Consalvo, Deborah Jackson, and Peter Rollins, without whose support and encouragement this report would not have been possible. Finally, thank you to our families and friends, for all of the hours devoted to this work that took us away from family life.

We hope most of all that the lives of Boston's children will in some way be touched and improved by our effort.

Charlotte Kahn Geoffrey Lewis Geeta Pradhan

Comments / Suggestions / Corrections

If you would like to comment on *The Wisdom of Our Choices: Boston's Indicators for Progress, Change and Sustainability*, please use the page below, copy and fax (617-589-3616) or send to: The Boston Community Building Network, The Boston Foundation, 1 Boston Place, Boston, MA 02108 or send an email to tra@tbf.org

What You Can Do Learn your neighbors' names • Join a block association • Join a parents group • Get to know someone from a different ethnic background • Register to vote and vote • Join a book club • Get a library card • Introduce yourself to a neighbor • Organize a block party • Volunteer at a community organization • Share your skills and expertise • Help an elderly neighbor • Donate to your favorite nonprofit organization • Learn another language • Attend a cultural festival • Try new foods • Encourage children to draw, paint, and perform • Take a dance or exercise class • Make art • Visit a museum • Walk the Freedom Trail • Join a sports league • Swim in Boston Harbor • Skate on the Frog Pond • Take your family to the Franklin Park Zoo • Hike the Great Blue Hill • Use your local library • Meet your child's teachers • Mentor someone younger • Volunteer in an after-school program or your child's school • Read to a child you know or one you don't know • Advance your education • Take English-as-a-Second-Language (ESL) • Lobby to increase the minimum wage • Tutor someone younger • Invest and save for the future • Mentor a young worker • Hire local youth • Take the T • Enjoy the Boston Waterfront and Harbor Islands • Walk, run, bike or jog • Boat on Jamaica Pond • Sail on the Charles River • Conserve energy • Weatherproof your home or apartment • Use a fuel-efficient vehicle • Care for a tree • Reduce, reuse, or recycle your trash • Plant a tree • Shop in neighborhood stores • Lobby to increase the minimum wage • Use your wealth to help others • Use your skills to help others • Plant flowers or bulbs in your yard, park or school yard • Grow a garden and share your produce • Pick up trash and keep neighborhood streets and parks clean • Buy Green-Star energy-efficient appliances • Support legislation to increase affordable housing • Consider boarders or a roommate • Take a homebuyers class • Use free screenings for breast cancer, prostate cancer and high blood pressure • Don't smoke or do drugs • Choose a designated driver • Offer your employees health insurance • Get an annual check-up • Get prenatal care • Have your children immunized • Find out how you can prevent HIV/AIDS • Exercise • Donate to a food bank • Take your child to the park • Organize a neighborhood clean-up • Report crimes • Speak out against domestic violence • Speak out against hate crimes • Get to know your neighborhood police officers • Welcome new neighbors • Read your neighborhood newspaper • Access the Internet (at a library, community center or at home) • Share your technology skills with a friend • Advance your technology skills • Donate your used computer • Learn to design a web site • Design a web site for a neighborhood store or nonprofit organization • Teach a grown up to fix a computer • Take public transit to work • Take public transit to recreational activities • Subsidize your employees' T passes • Take a ferry • Offer a neighbor a ride • Keep transit stations clean • Carpool • Learn about global conditions and get involved • Think of other things you can do to make Boston a better place for everyone